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Vol. VIII

TRANSCRIPT OF RECORD

(Pages 4911 to 5522)

Supreme Court of the United States

OCTOBER TERM, 1946

No. 343

STATE OF NEW YORK, STATE OF DELAWARE, STATE OF INDIANA, ET AL., APPELLANTS,

vs.

THE UNITED STATES OF AMERICA, INTERSTATE COMMERCE COMMISSION, STATE OF ALABAMA, ET AL.

No. 344

STATE OF MAINE, STATE OF NEW HAMPSHIRE, STATE OF VERMONT, ET AL., APPELLANTS,

vs.

THE UNITED STATES, OF AMERICA, INTERSTATE COMMERCE COMMISSION, ET AL.

No. 345

THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY, BEAVER, MEADE AND ENGLEWOOD RAILROAD COMPANY, CHICAGO, BURLINGTON & QUINCY RAILROAD COMPANY, ET AL., APPELLANTS,

vs.

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FILED AUGUST 1, 1946.

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2—Railroad Freight Service Costs in the Various Freight Territories, 1939. (Textual or explanatory material)	5787	5141

JUDD & DETWEILER (INC.), PRINTERS, WASHINGTON, D. C., OCT. 24, 1946.

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Exhibit 5—Proceedings before Interstate Commerce Commission in Docket Nos. 28,300 and 28,310—Continued	Original	Print
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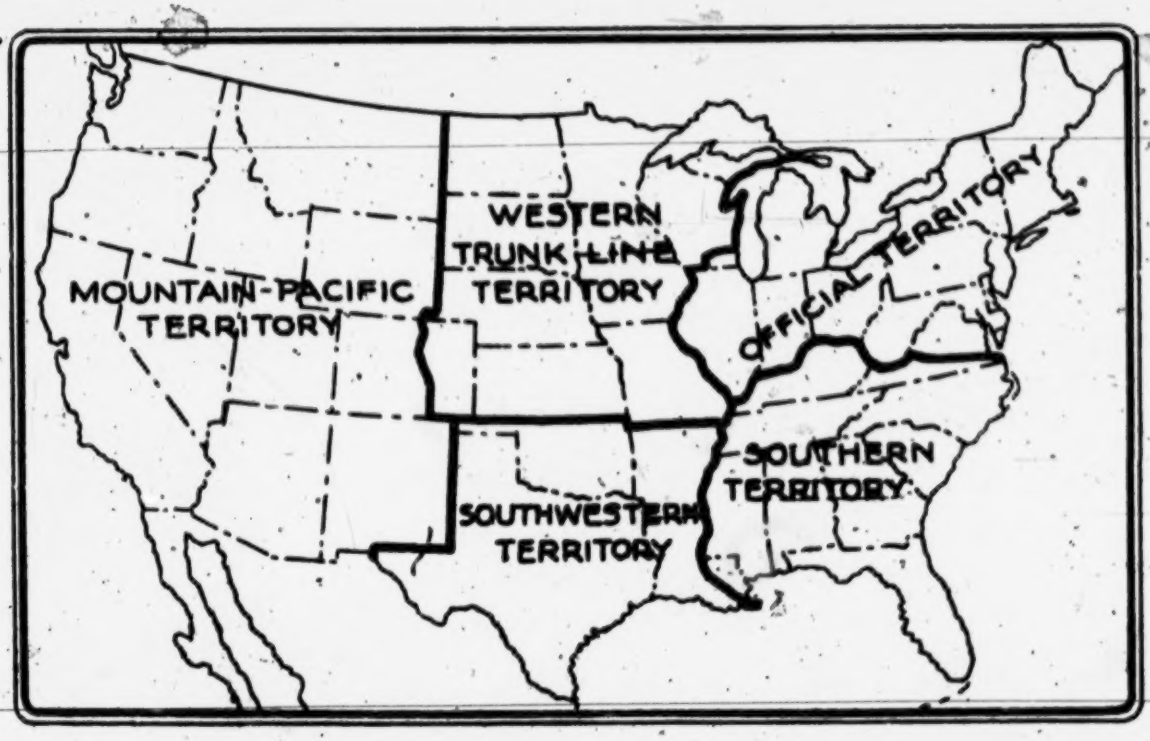
EXHIBIT 1

INTERSTATE COMMERCE COMMISSION
BUREAU OF STATISTICS

DISTRIBUTION OF THE NATURAL RESOURCES OF THE UNITED STATES BY FREIGHT RATE TERRITORIES



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WASHINGTON, D.C., JUNE, 1941

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[fol. 5504] DISTRIBUTION OF THE NATURAL RESOURCES OF THE UNITED STATES BY FREIGHT RATE TERRITORIES

Chapter I

Nature of the Study

Divisions of the Study

Irrespective of whether and to what extent freight rates are or are not responsible for the differences in the growth and development of the different freight rate territories, it seems reasonable to suppose that both freight rates and the material prosperity of the population of these rate areas have been associated in some degree with the natural resources within their boundaries.

Although much has been said and written regarding these natural resources, it does not appear that any comprehensive study has been made of their rate territory distribution. Geographical presentations for most of the data employed in this study are usually confined to state figures or to those for the grand divisions established by the Bureau of the Census of the United States Department of Commerce for the tabulation of Census data. In this study, however, the natural resources have been summarized by freight rate areas to the extent that it has been found practicable to make such a distribution.

For this purpose natural resources have been broadly interpreted to mean the soil, water, and mineral resources of the United States which are substantially the same divisions as those used by the National Resources Planning Board.[1]

For convenience in discussion, however, this classification has been revised and the analysis divided into five major topics: mineral, energy, agricultural, forest, and [fol. 5505] human resources. The first includes a survey of the significant mineral reserves and comparisons of mineral production, excluding the energy minerals. The reserves and production of the latter, together with the actual and potential generation of energy from water

[1] A Report on National Planning and Public Works in Relation to Natural Resources, etc., National Resources Planning Board, 1934, Foreward, p. v.

power, are considered in the second subdivision dealing with the energy resources. The third section surveys the actual production of agricultural crops and livestock products together with the potential capacity for production, giving consideration to the natural limitations imposed thereon by the character of the soil, the climate, the rainfall, and other similar factors. The fourth section presents the distribution of our reserves of different kinds and classes of timber. Last but not least the final section sets forth the distribution of our human resources according to various social-economic groupings within each rate territory.

Character of the Data

Of necessity the character of the data used for measuring these resources and distributing them by rate territories varies greatly. Certain of our resources are subject in considerable degree to quantitative measurement. This is true, for example, of the reserves of some minerals as well as timber. Data on reserves, however, are frequently unavailable, and in the case of agriculture the resources are not of a character to permit quantitative estimates of reserves. Available information regarding resources in terms of reserves, however, has been employed in the case of timber and of certain significant minerals. Where the character of the commodity or the nature of the information was such that data of this sort were not available, it has been necessary to use figures of actual and potential production, product value, and the like. For the most part the material utilized has been drawn from standard government publications and reports or from quasi-governmental reports such as those of the National Resources Committee. In some cases, however, publications and authors of recognized standing have been used where other information was not available.

[fol. 5506] For a variety of reasons the data employed throughout the report are of differing dates. Because of the unavailability as yet of certain data from the recent census, it has been necessary to use the preceding one in several cases. At the time the mineral resources material was prepared the Minerals Yearbook for 1940 was not available and consequently figures from the 1939 volume were perforce utilized except that some information of a later date was procured directly from the Bureau of Mines. There are other cases where data are now available which

were not so at the time the statistical tables were prepared. In practically all cases, however, the data utilized were those of the latest data available at the time when the particular sections were written. Owing to the limited staff available, it was impracticable to prepare all the subdivisions of the report simultaneously.

Distribution of the Data by Rate Territories

The boundaries of the five freight rate territories, for which data have been compiled, are set forth in an order of the Commission dated January 9, 1940, requiring Class I railways to compile certain information bearing on the Class Rate Case.[1] The five rate territories may be described by reference to the Census grand division groupings of states. Map A also shows the areas included in each territory.[2]

The Census grand divisions include in the South Atlantic grouping Delaware, Maryland, the District of Columbia, all within Official territory, and West Virginia, also in Official territory except for a very narrow strip in the

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[1] Interstate Commerce Commission. Docket No. 28,300, Vol. I, Class Rate Investigation, 1939, and No. 28,310, Consolidated Freight Classification.

[2] As defined by Paragraph 4 of the Commission's order ibid.

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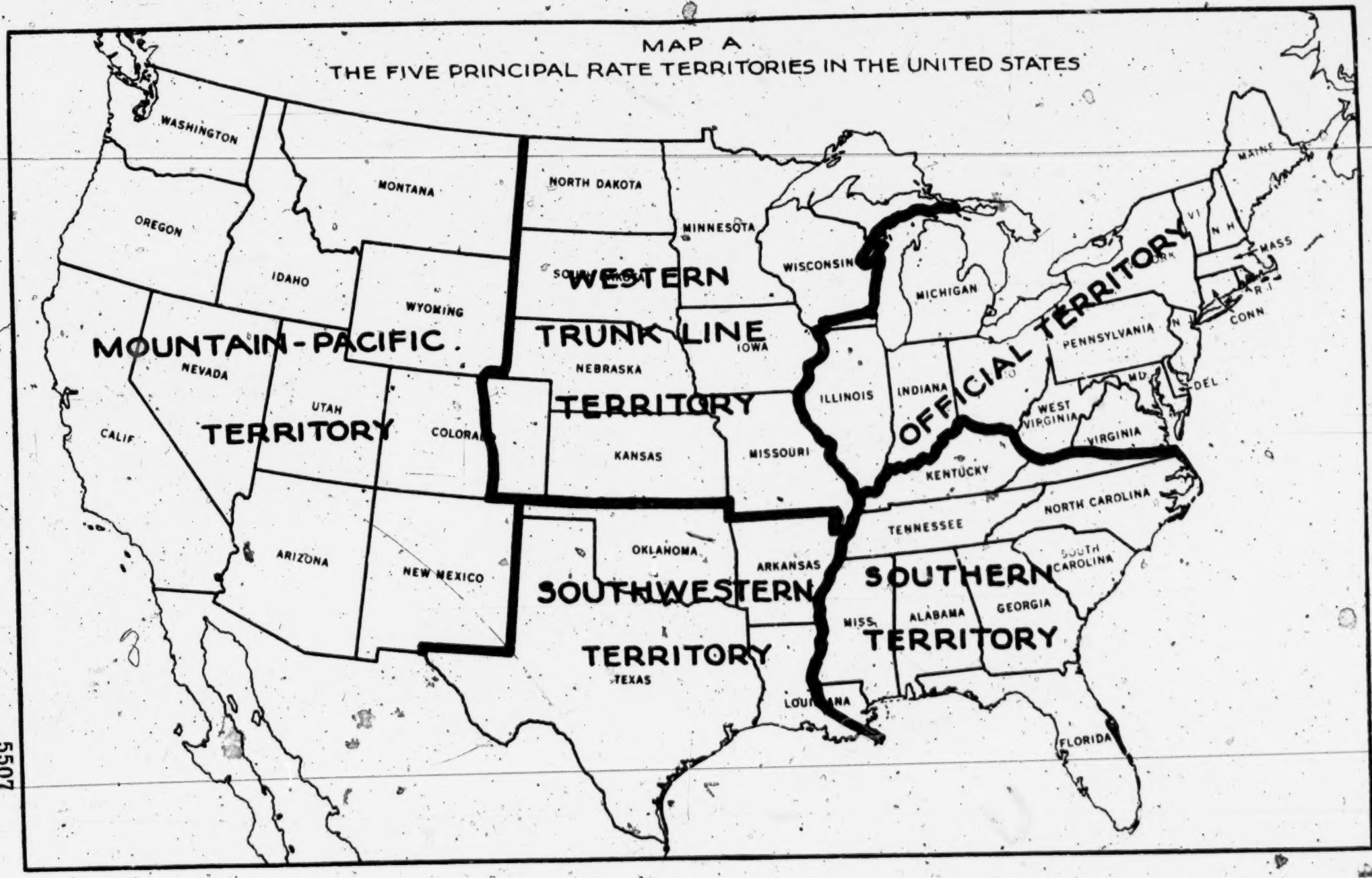
MAP A
THE FIVE PRINCIPAL RATE TERRITORIES IN THE UNITED STATES
WASHINGTON
OREGON
MONTANA
IDAHO
WYOMING
NEVADA
UTAH
CALIF
COLORA
ARIZONA
NEW MEXICO
MOUNTAIN-PACIFIC
TERRITORY
NORTH DAKOTA
MINNESOTA
WESTERN
TRUNK LINE
TERRITORY
IOWA
NEBRASKA
KANSAS
MISSOURI
OKLAHOMA
ARKANSAS
SOUTHWESTERN
TERRITORY
TEXAS
LOUISIANA
WISCONSIN
MICHIGAN
ILLINOIS
INDIANA
OFFICIAL TERRITORY
PENNSYLVANIA
WEST VIRGINIA
VIRGINIA
KENTUCKY
TENNESSEE
NORTH CAROLINA
SOUTH CAROLINA
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[fol. 5508] extreme southern portion of the state. Virginia is likewise included with the South Atlantic grouping although the entire northern section of the state (amounting to over 60 percent of the land area) is in Official territory. The Southern rate territory includes the Census East South Central and South Atlantic states with the exceptions noted above in the South Atlantic division, and that portion of Louisiana lying east of the Mississippi. The New England, Middle Atlantic, and East North Central states are all included within Official territory except that the northern peninsula of Michigan and all of Wisconsin except a narrow strip of territory along Lake Superior and the southeastern corner of that state are excluded from that rate area. Western Trunk Line territory coincides with the Census West North Central states but also includes the northern peninsula of Michigan, and all of Wisconsin except as specified above, the eastern third of Colorado, and the southeastern corner of Wyoming. The remainder of the latter two states belongs to the Census Mountain division. Southwestern territory coincides with the Census West South Central division except that that portion of Louisiana east of the Mississippi is included in Southern territory as noted above. Mountain-Pacifis territory includes the Census grand divisions corresponding to these designations with the exception of those parts of Colorado and Wyoming referred to above which are included in Western Trunk Line territory.

The freight rate territory boundaries, therefore, cut across state lines in Michigan, Wisconsin, Virginia, West Virginia, Louisiana, Colorado, and Wyoming, and most of the information which is presented in this report is not available by counties but only by states. In some cases the areas of reserves or production in states which are within two rate territories are so definitely located in the one or the other that the distribution of the resources could be made in a single table. In most cases, however, it has been necessary to show the rate territory distribution in two groupings in which the figures of each of the "two territory" states are assigned alternatively to the two rate areas involved. Exceptions are West Virginia and Wyoming, which because of the small areas outside Official and Mountain-Pacific territories, respectively, have been assigned to these territories throughout.

[fol. 5508a] In the case of agriculture, county figures for the commodities are available and the state figures have been distributed between the two rate territories according to the county lines. The Census of Agriculture as of 1939 was not complete at the date of this report so 1929 Census county figures were used in apportioning 1939 state figures reported by the United States Department of Agriculture. All counties in the upper peninsula of Michigan were included in Western Trunk Line territory and all counties in the lower peninsula were included in Official territory. In Wisconsin, Virginia, Louisiana, and Colorado the counties were allocated to territories so as to form a line roughly corresponding with the rate territory boundaries shown by Map A.

[fol. 5509] CHAPTER II

Rate Territory Distribution of Mineral Resources

Relative Importance of Different Minerals

Information regarding the reserves of minerals except for those which constitute sources of fuel energy and a few others are relatively scanty and in some cases at least practically nonexistent. "Some minerals are so erratic in occurrence that estimates even after careful geologic study and interpretation may mean little or nothing. * * * Some minerals are so common that there has been little incentive to estimate their quantities. Some have not been estimated because the known deposits were uneconomic. It is surprising * * * how few geologists and engineers have been willing to estimate quantitatively the amount of ore in mines, quarries or prospects."[1]

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[1] Kenneth Leith and Donald M. Liddell, The Mineral Reserves of the United States and Its Capacity for Production, National Resources Committee, March 1936, p. 4. "Mining has always been a more or less hazardous venture: * * * The very nature of ore deposits makes predictions of their reserves hazardous. A coal bed can often be measured and its total available tonnage calculated. An iron mine is sometimes carefully drilled and its tonnage may be estimated without great chance of error. A gold mine on the other hand may consist of pockets of ore haphazardly distributed in a wide lode. Any estimate of the amount of

[fol. 5510] This rather general shortage of statistical estimates of the reserves of many minerals has made it necessary to discuss a number of these resources in terms other than the reserves available in the various freight rate territories. Although the latter is admittedly a less satisfactory basis of comparison, it is not as seriously objectionable as might at first be thought. For certain nonferrous metals considerable information on reserves is available. A few additional minerals are so generally and profusely distributed that the reserves of the different freight rate territories might not be particularly significant. According to the Census of Mines and Quarries in 1929, for example, sand and gravel was produced in practically every state in the Union and limestone in 42 states.[1] In these cases it is quite possible that the total reserves of every freight rate territory are so huge in terms of any probable utilization that the proportion in any rate territory is much less likely to exercise a significant influence on the economic development of the territory than is the case with those minerals required in large quantities by the economy but which are both more scarce in terms of total consumption and also less profusely distributed.

Outside of the energy *numerals*, copper, iron ore, limestone and sand and gravel, the reserves of most minerals are of relatively minor importance in our economy. By this it is not intended to imply that certain of these minerals are

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'pay ore' in a mine of this sort would of necessity be • • • at best a relatively inaccurate prediction.

"Ore bodies may occur in many shapes and patterns. A vein lode has definite boundaries. In it there will usually be found little sub-ore or mineral bearing material of a grade too low to be economically mined. On the other hand, many disseminated ore bodies • • • have indefinite boundaries either of grade or of thickness, determined only by economic limits. These limits vary with changing technological process and with the economic factors of costs. • • • Improved processes of extraction will probably allow for the utilization of mineral raw materials not now considered economic." Ibid., p. 3.

[1] Mines and Quarries, 1929, Fifteenth Census of the United States, Table 3, Sand and Gravel, p. 374; Table 25, Limestone, p. 357; Table 32, Crushed stone, p. 366.

not exceedingly important in a technical sense, as strategic or critical in the economy. For certain of such minerals even reasonably satisfactory substitutes may not be available in the present state of technology and the production of goods requiring such strategic minerals may obviously be completely dependent thereon. But in terms of the value product, the average number of persons employed, or the average wages paid, many mineral industries are insignificant even though highly essential where satisfactory substitutes are not available. In addition, there is the fact that some of these minerals, such as the various kinds of stone, can be extensively substituted for one another in [fol. 5511] certain kinds of use. The extent of the reserves of many minerals, therefore, seems clearly not as important for this analysis as in the size of the reserves of various energy minerals, iron ore, and certain nonferrous metals for which considerable data on such reserves are available and which are much more important to our economy in terms of value product, employment, and wages.

The situation described is indicated in more detail by Table 1 which shows the Census figures of value product, wage jobs, and wages for each of 32 mineral industries in 1929, the figures for the year 1939 not being available at this writing.[1]

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[1] The year is not, perhaps, particularly important since the table is designed only to indicate something with regard to the relative importance of those metallic and nonmetallic minerals which are not classifiable as energy resources. For this purpose 1929 with its high level of productivity and employment may be almost as satisfactory as 1939 were figures for the later year available. Figures of volume and value of production are compiled by the Bureau of Mines also but these figures are not on a uniform basis. For some minerals they are on a "mined" basis. In others they are "shipped from mines", "produced", "sold by producers", "sold or used by producers". The Bureau of the Census, on the other hand, endeavors to present the total value to the producer of the actual annual output. Also the labor data are not available in the Bureau of Mines figures.

(Here follows 1 photolithograph, side folio 5512)

Table 1.--Relative Importance of Specified Mineral Industries, Excluding Energy Minerals, 1929 1/

Industry	Value of production	Labor	
		Average wage earners	Wages
Metallic minerals:			
Copper	$283,517,373	44,502	$73,199,785
Iron ore	197,334,543	28,516	40,905,190
Lead	67,561,778	14,007	22,917,435
Zinc	44,866,026	11,900	16,274,339
Gold, lode and placer	21,429,415	5,931	9,625,515
Silver	8,457,263	2,593	4,326,719
Mercury	2,820,166	1,029	1,383,603
Manganese	1,184,561	354	392,362
Other metals	2/ 6,649,976	2/1,244	2/ 1,506,851
Total metallic	633,821,106	110,076	170,531,799
Non-metallic minerals:			
Limestone	117,257,784	32,300	39,188,364
Sand and gravel 3/	112,447,087	18,061	25,384,341
Granite	30,381,373	10,037	12,639,524
Clay	10,753,445	4,239	3,757,998
Slate	10,486,390	4,098	4,384,038
Marble	7,538,905	3,350	3,291,541
Phosphate rock	13,043,769	3,201	3,303,940
Basalt	15,543,687	3,053	4,498,093
Sulphur and pyrites	37,126,148	2,199	3,482,606
Sandstone	6,311,977	2,156	2,626,437
Gypsum	5,740,188	2,078	2,627,733
Silica 4/	4,645,142	1,433	1,677,407
Asphalt and bituminous rock	5,123,836	1,123	1,254,835
Fluorspar	2,858,344	1,053	1,112,322
Fuller's and filtering earths	4,811,629	991	853,228
Barite	1,801,314	844	648,488
Feldspar	1,935,335	598	526,896
Talc and soapstone	2,687,953	550	615,355
Abrasives 5/	1,411,284	462	491,484
Magnesite	2,043,905	351	465,936
Mica	516,305	226	195,142
Asbestos	397,482	195	236,789
Millstones and pulpstones	620,835	164	221,318
Miscellaneous stone	8,475,008	1,841	2,405,906
Miscellaneous minerals	3,502,876	305	301,197
Total non-metallic	407,462,001	94,808	116,690,918
Grand total	1,041,283,107	204,884	287,222,717

See next page for footnotes.

[fol. 5513] (Footnote for Table 1:)

[1] Mines and Quarries, Fifteenth Census of the U. S., 1929, Tables 9 and 24, pp. 13 and 33-35.

[2] Bauxite, molybdenum, titanium, tungsten, vanadium.

[3] Includes glass sand and molding sand.

[4] Diatomaceous earth, ganister, quartz, quartzite, silica rock, silica sand, siliceous mica schist, tripoli.

[5] Emery, garnet and industrial sapphires and diamonds, etc.

[fol. 5514] Out of a total of 32 metallic and nonmetallic minerals, only four—copper, iron ore, limestone, and sand and gravel—showed a product value of in excess of 100 million dollars and only eight (lead, zinc, granite, sulphur and pyrites in addition to the foregoing) a value in excess of 30 million dollars.

The total value product of these eight industries in 1929 aggregated $890,492,117 or 85.52 per cent of the total of $1,041,283,107 for all minerals excluding the fuel energy sources. Again, only three of these industries (copper, iron ore, and limestone) employed an average of over 20 thousand persons, and only seven (lead, zinc, granite, sand and gravel in addition to the foregoing) more than 10 thousand. These seven industries also were the only ones each of which paid more than 10 million dollars in wages in 1929. In fact, except for these seven mineral industries and gold mining, no other accounted for as many as 5,000 wage earners.

The seven industries with over 10,000 wage earners (copper, iron ore, lead, zinc, limestone, granite, and sand and gravel) accounted for 159,323 wage earners out of a total of 204,884 or 77.8 per cent of the total, the remaining 25 or more industries offering jobs to only 45,561 workers or less than 2,000 per industry on the average. These seven industries also paid $230,508,978 in wages in 1929 or more than 80 per cent of the total wage bill of $287,222,717.

The figures in this table and the discussion in connection therewith may be taken as the explanation of the restriction of the analysis of the mineral reserves by rate territories to the more important minerals and of the failure to carry this analysis into certain of the minor and profusely distributed minerals.

Metallic Mineral Reserves

Most of the data bearing on the mineral reserves of the United States have been brought together by Leith and Liddell in their report on mineral reserves for the National Resources Committee.[1] The material contained in that report has been the primary source of the information for the distribution of the more important mineral reserves by freight rate territories.

[fol. 5515] *Iron Ore*

There are so many known bodies of iron ore of different composition that it is a matter of great difficulty to draw a line between ore and sub-ore or between available and non-available ore. The report for the Resources Committee has drawn these lines on the basis of a hypothetical year of normal industrial activity which involves "an assumption of continuing conditions substantially the same as those obtaining at the present time." [1a]

The greatest iron ore deposits of the country are in the Lake Superior District. Estimates of the Minnesota and Michigan Tax Commissioners places the unmined iron ore reserves as of 1939 at 1,208,047,717 gross tons in Minnesota and 149,754,897 tons in Michigan.[2] Besides these there is in the great Mesabi range of Minnesota [3] (1) a vast quantity of intermediate material "a grand mixture of ore, sand and rock" with a 40 per cent iron content and (2) iron bearing rock which contains 30 per cent iron and is far too poor for the steel plants to utilize.[4] Large quantities of the intermediates are already being subjected to beneficiation processes. According to Leith and Liddell, the introduction of these beneficiation practices has added over 300 million

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[1] The Mineral Reserves of the United States and Its Capacity for Production, op. cit.

[1a] Ibid., p. 97. The statistics used in their discussion of iron ore are for the period 1928-1934.

[2] Minerals Yearbook, 1940, p. 545.

[3] The Mesabi contains 95 per cent of all the ore known to exist in Minnesota. E. W. Davis, Mines Experiment Station, Univ. of Minnesota, The Iron Ore Deposits of Minnesota, Univ. of Minnesota Bull. XL, No. 27, March 1937, p. 2.

[4] Ibid., p. 3.

tons to the Mesabi reserves and the reserves of the low grade ores and taconites in this region not at present economically beneficiable may be estimated at 72 billion tons or a reserve for 1,600 years of use if it all could be used.[5]

[fol. 5516] The Birmingham ore district is a self-contained industrial entity or economic unit so far as the production of steel is concerned. This area contains large quantities of iron ore and coking coal together with fluxing dolomite and limestone all in a basin about 40 miles wide by 75 in length. Drilling has demonstrated commercial ore in a quantity of 1½ to 2 billion tons or enough to last some 300 years at the expected rate of production.[1]

Besides these two major sources of ore there are extensive deposits of varying degrees of availability or nonavailability scattered throughout the country. There are known iron ore deposits in 13 of the states west of the Mississippi River,[2] most of them small and unimportant, and there are also deposits in the eastern states. The Tennessee River Basin apparently has in excess of 100 million tons available and nearly 2 billion tons of reserves, nonavailable at present, chiefly in northeastern Tennessee and southwestern Virginia. Map 1 shows the distribution of these iron ore reserves.

Although the Mineral Reserves Report for the National Resources Committee gave no tabulation of reserves by states or census districts, Table 2 presented herewith has been prepared from the data contained in the text of that report. This table attempts to show the iron ore reserves of the United States by freight rate territories on the basis both of ore substantially available at the present time and of the present nonavailable ore which may subsequently become available. In the groupings in Table 2 the Lake Superior reserves are all assigned to Western Trunk Line territory and the reserves of Maryland and Virginia to the Southern territory. These latter reserves were grouped by the Mineral Reserves Report with other southern states and perforce were included in that grouping. The tonnage

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[5] The Numeral Reserves of the United States and its Capacity for Production, op. cit., p. 99.

[1] Ibid., p. 100.

[2] Ibid., p. 105.

involved is at present unavailable and not likely to become available because of the unprofitableness of operation. Colorado has been grouped with the Mountain-Pacific division, the tonnage being so small that it has but little effect on the figures. The large Southwestern deposit in the State of Texas, though classed as available, was not commercial at the time of the Report (1936) although it was apparently expected to become so in the not far distant future.

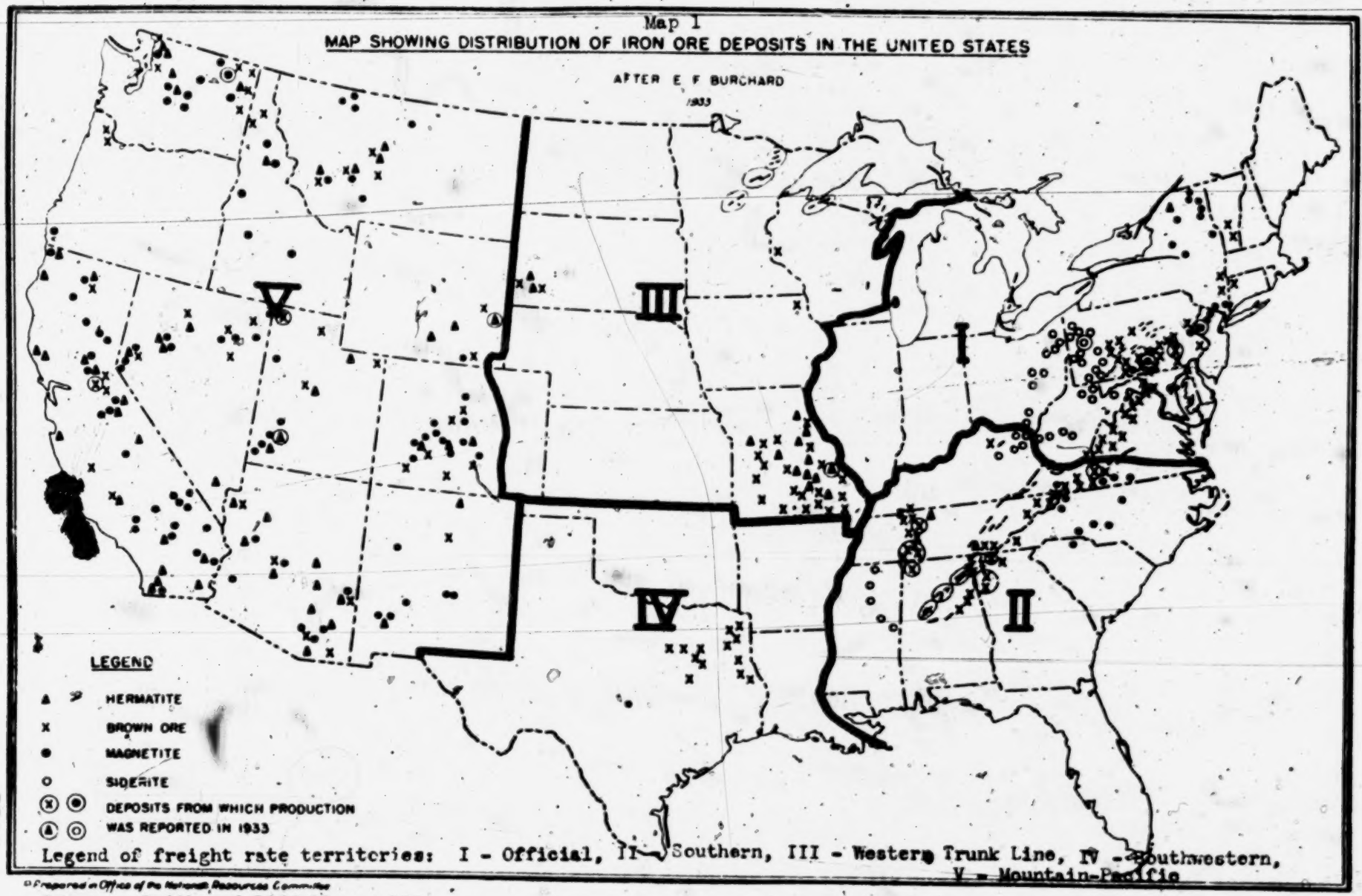
(Here follows 1 photolithograph, side folid 5517)

Map 1

MAP SHOWING DISTRIBUTION OF IRON ORE DEPOSITS IN THE UNITED STATES

AFTER E. F. BURCHARD

1933



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific

Prepared in Office of the National Resources Committee

Source: Leith and Liddell, p. 119.

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[fol. 5518] Table 2—Iron Ore Reserves of the United States by Freight Rate Territories, 1935 (approximate)[1]

(In millions of tons of 2,240 lbs.)[2]

Territory	Available		Nonavailable	
	Amount	% of U. S.	Amount	% of U. S.
Official	147	3.7	35	(3)
Southern	2,120	53.2	[4]2,307	3.1
Western Trunk Line	1,450	36.3	[5]72,000	96.7
Southwestern	200	5.0	.....	....
Mountain-Pacific	71	1.8	[7]117	0.2
United States	3,988	100.0	74,459	100.0

[1] Computed from text of The Mineral Reserves of the United States and its Capacity for Production, op. cit., pp. 97–111.

[2] In certain cases the tonnage unit is not specified but it has been assumed in those cases that long tons were intended.

[3] Less than 0.05%.

[4] Large reserves of nonavailable ore for which no estimate has been made are located in Alabama.

[5] Large quantities of nonavailable ore for which no estimate has been made are located in Wyoming, Arizona, Nevada and other states.

Copper

In 1934 Percy Barbour estimated the total copper reserves of the United States mineable at 10 cents per pound of metallic copper to be 30 to 35 million tons with perhaps an additional 3 or 4 million tons mineable if the price were 12 cents. These figures were equivalent to a forty years' supply based upon the last ten-year average rate of consumption. An estimate made the following year in connection with the Arizona tax legislation by Joralemon, Lynch and Leith was 26,122,000 tons mineable at or below 12 cents. According to their trend predictions, this supply would last for some 32 years based on a production rate of 725,000 tons per annum. Leith and Liddell in their report for the Resources Committee estimate 26,390,000 tons as the total [fol. 5519] metallic copper in the reserves.[1] This figure, however, included 110,000 — of Alaska copper belonging to Kennecott, now exhausted according to information from the Bureau of Mines, and 14,100 tons of Arizona copper of the United Verde Extension group also now exhausted. If we adjust the total for these differences, the reserves would aggregate slightly in excess of 26 million tons without allowance for depletion other than that represented by the exhaustion of the two areas referred to above.

[1] The Mineral Reserves of the United States and its Capacity for Production, op. cit., pp. 55 ff.

On this basis the distribution of the reserves as between the freight rate territories would be as follows:

Reserves of Metallic Copper, by Freight Rate Territories, 1936

Territory	Tons	% of U. S.
Official	.....	.....
Southern	120,000	0.5
Western Trunk Line (Mich.)	335,000	1.3
Southwestern	.....	.....
Mountain-Pacific	24,884,000	98.2
Total	[1]25,339,000	100.0

[1] Does not include 800,000 tons of copper in mines whose location is not shown in the table.

Source: The Mineral Reserves of the United States and its Capacity for Production, op. cit., p. 56.

Lead and Zinc

The production of lead and zinc are closely interrelated as are the economics of the two metals. Only about one-third of the lead produced in the United States comes from [fol. 5320] mines whose sole production is lead. The balance is produced in association with silver, copper, gold, or zinc. Zinc, moreover, is also a by-product to perhaps a greater extent than any other nonferrous base metal. Profitable production of either lead or zinc, therefore, is or may be to a considerable extent dependent upon prices of other metals with which either or both may be associated. In the case of both metals there are also important bodies of sub-ore or sub-marginal ore which may be affected by the price changes of any one of the nonferrous metals more or less frequently associated with lead and zinc. In two of the most important lead districts, the Southeastern Missouri and the Tri-State fields, the boundaries of the ore bodies grade into sub-ore both in tenor and thickness so that an increase in the price of the ore automatically extends the area of profitable ground. Zinc probably has more sub-marginal reserves than most nonferrous metals. Until the perfection of the flotation process many zinc reserves were uneconomical. Since then the flow of metal has not only kept down the price but in several cases has caused developed zinc tonnages to remain idle.

According to the Leith and Liddell report for the Resources Committee the measured and published lead ore reserves were 3,302,158 short tons of metallic lead. Finlay in 1934 believed it difficult for the four most important dis-

tricts, Southeastern Missouri, Coeur d'Alene, the Tri-State (Kansas, Missouri, Oklahoma), and Utah fields, to produce more than 8 and the whole country more than 10 million tons. Leith and Liddell's conclusions regarding lead were that "our reserves are not large and we will probably have a deficiency of this metal within this or the next generation."[1] Also according to these authorities, the measured and estimated reserves of zinc in the important mines of the country aggregated 12,167,580 short tons of metal mineable at prices around the 4 to 6 cent range (1936).

Both the lead and zinc reserves of the most important mines and districts were shown in the Leith-Liddell tables and from these tables the ore reserves have been distributed by freight rate territories.

Except for Southern territory which shows very small reserves of either metal, all the other freight rate territories possessed important reserves of either lead or zinc [fol. 5521] or both. The Mountain-Pacific and Western Trunk Line territories are the most important sources of reserves of lead with 37 per cent and 51 per cent, respectively. Southwestern territory leads in zinc reserves with 37 per cent followed by Official territory with 24 per cent and Mountain-Pacific territory with 22 per cent of the national total.

Table 3.—Lead and Zinc Reserves, by Freight Rate Territories, 1936[1]
(Short tons)

Territory	Lead	Zinc
Official	85,000	2,940,000
Southern	90,000	510,000
Western Trunk Line[1]	1,696,440	1,516,800
Southwestern[1]	193,560	4,483,200
Mountain-Pacific	1,237,158	2,713,580
Total	3,302,158	12,163,580
Percentage of total		
Official	2.57	24.17
Southern	2.73	4.19
Western Trunk Line[1]	51.37	12.47
Southwestern[1]	5.86	36.86
Mountain-Pacific	37.47	22.31
Total	100.00	100.00

[1] Compiled from Leith and Liddell, The Mineral Reserves of the United States and Its Capacity for Production, op. cit., p. 243, except that Tri-state lead figure is divided 9.22 percent, Kansas; 16.13 percent, Oklahoma; and 74.65 percent, Missouri, according to production in 1929, Bureau of Mines Mineral Yearbook, 1929, Part I, p. 236. Zinc figure divided 25.28 percent, Kansas, and 74.72 percent, Oklahoma, same Yearbook, p. 678.

[1] The Mineral Reserves of the United States and its Capacity for Production, op. cit., p. 124.

Table 3-A. - Minor Metals. Value of Production, by Freight Rate Territories, 1/ 1939

Item	Territory					Undistributed	United States
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific		
	(Dollars)						
Gold produced	69,500	544,400	21,617,200	11,900	115,986,400	-	138,229,400
Silver produced	109,232	20,188	281,934	936,949	41,795,781	-	43,153,084
Manganese and manganiferous ores shipped	380	267,600	1,213,924	2/	379,094	1,082,069	2,943,067
Chromite (ores and concentrates) shipped from mines	-	-	-	-	46,892	-	46,892
Molybdenum shipped	-	-	3/	-	4/ 22,157,000	-	22,157,000
Tungsten ore and concentrates shipped from mines	-	-	-	-	4,402,182	-	4,402,182
Vanadium ores shipped	-	-	-	-	1,053,660	-	1,053,660
Bauxite shipped from mines	-	91,282	-	2,074,954	-	-	2,166,236
Mercury produced	-	-	-	37,834	1,719,895	178,985	1,936,714
	Percent of U. S. totals						
Gold produced	0.05	0.39	15.64	0.01	83.91	-	100.00
Silver produced	0.25	0.07	0.65	2.17	96.86	-	100.00
Manganese and manganiferous ores shipped	0.01	9.09	41.25	-	12.88	36.77	100.00
Chromite (ores and concentrates) shipped from mines	-	-	-	-	100.00	-	100.00
Molybdenum shipped	-	-	3/	-	4/ 100.00	-	100.00
Tungsten ore and concentrates shipped from mines	-	-	-	-	100.00	-	100.00
Vanadium ores shipped	-	-	-	-	100.00	-	100.00
Bauxite shipped from mines	-	4.21	-	95.79	-	-	100.00
Mercury produced	-	-	-	1.95	88.81	9.24	100.00

1/ States divided by freight rate territory boundaries were apportioned to territories as follows:
Michigan - Official territory
Wisconsin - Western Trunk Line territory
Virginia - Southern territory
Louisiana - Southwestern territory
Colorado - Mountain-Pacific territory.

2/ Arkansas included with undistributed.
3/ Small undetermined quantity produced in Wisconsin.
4/ Contains a small undetermined quantity produced in Wisconsin.

Source: Minerals Yearbook, 1940.

[fol. 5523] *Minor Metals*

Estimates of reserves of metals other than iron, copper, lead, and zinc are not available in such form that they can be presented by freight rate territory totals. The distribution of commercial deposits of certain minor metals, however, is indicated by Table 3-A which shows the value produced in 1939. This table shows that Mountain-Pacific territory is the outstanding producer of all of the minor metals for which state figures were reported, excepting only manganese and bauxite. Western Trunk Line territory appears to be the leader in manganese production, although no definite conclusions can be drawn because of the large portion of the value produced which is not distributed by states. Southwestern territory is the principal producer of bauxite.

The five states divided by freight rate territory boundaries were arbitrarily allocated to territories as follows: Michigan to Official, Wisconsin to Western Trunk Line, Virginia to Southern, Louisiana to Southwestern, and Colorado to Mountain-Pacific territory. No figures were computed for an alternative grouping of states, as has been done in certain other sections of this report, but the figures for the five states in question are presented in Table 3-B and an inspection of this table will reveal that a different grouping of the states would have produced essentially similar results.

Table 3-B.—Minor Metals. Value of Production of States vided by Freight Rate Territory Boundaries, 1939

(Dollars)

Item	Michigan	Wisconsin	Virginia	Louisiana	Colorado
Gold produced	.....	.....	12,700	.....	12,982,700
Silver produced	69,363	.....	991	.....	5,569,932
Manganese and manganiferous ores shipped	.....	.....	48,859	.....	(1)

[1] Undistributed.

Source: Minerals Yearbook, 1940.

[fol. 5524] *Non-Metallic Minerals*

As was indicated previously in this report, certain of the non-metals (sand and gravel, limestone, etc.) are so generally distributed that estimates of reserves seemed not to be important. In order to give an indication of the impor-

tance of these resources to each of the territories, however, figures were compiled for the value of non-metals or production thereof sold or used by producers in 1939. In certain cases, as indicated by Table 3-C, the figures represent sales only, or in other cases, shipments only, and consequently are not exactly comparable. They indicate in general, nevertheless, the relative significance, in terms of value, of the various non-metals. The last three items in the table (Portland cement, lime, and salt) all require some processing for a considerable portion of their production, but are included in the mineral production data because they are reported with other non-metals in the Bureau of Mines Yearbook.

Portland cement, the most important non-metal from the standpoint of value shipped in 1939, is produced principally in Official territory, followed in order of importance by Mountain-Pacific and Western Trunk Line territories. There is only a small production in Southern and Southwestern territories. Official territory also leads in limestone and sand and gravel, the next two minerals in order of importance. Southern and Western Trunk Line territories vie for second place in the production of limestone and Mountain-Pacific territory ranks second in the production of sand and gravel. No other non-metal (for which figures were available) accounted for over 36 million dollars of value sold or used in 1939.

Altogether, Official territory ranks first in limestone, sand and gravel, fire clay, slate, basalt, sandstone, gypsum, talc, Portland cement, lime, and salt. Southern territory ranks first in granite, gaolin, ball clay, fuller's earth, marble, phosphate rock, fluorspar, and crude feldspar. Western Trunk Line ranks first in barite, Southwestern territory first in sulphur, and Mountain-Pacific territory first in bentonite, miscellaneous clay, and miscellaneous stone.

(Here follow 4 Photolithographs, side folios 5525-5528.)

Table 3-C. - Value of Non-Metals Sold or Used by Producers, by Freight Rate Territories. 1/ 1939

Item	Territory						United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	Undistributed	
	(Dollars)						
Limestone (dimension stone)	4,393,447	125,622	775,565	823,894	13,549	2/ 545,765	6,677,842
Limestone (crushed and broken)	48,500,257	16,938,745	16,259,017	3,916,761	2,094,858	3/ 292,239	88,001,877
Total limestone	52,893,704	17,064,367	17,034,582	4,740,655	2,108,407	838,004	94,679,719
Sand and gravel	44,950,797	7,910,054	10,720,074	6,296,220	20,347,440	4/ 4,976,350	95,200,935
Granite (dimension stone)	5,669,906	1,846,405	1,858,000	214,225	209,335	39,632	9,837,553
Granite (crushed and broken)	1,782,979	8,169,142	238,223	7,435	2,077,422	383,229	12,658,430
Total granite	7,452,885	10,015,547	2,096,223	221,660	2,286,757	422,911	22,496,983
Clay sold:							
Kaolin	164,562	5,599,436	-	-	111,719	324,889	6,200,606
Ball clay	21,651	873,748	-	-	-	40,322	935,721
Fire clay	3,388,768	605,894	5/ 1,171,643	34,196	551,963	49,529	5,801,993
Bentonite	-	-	217,622	148,139	921,036	415,596	1,702,393
Fuller's earth	-	1,035,066	-	359,058	-	297,731	1,691,855
Miscellaneous clay	58,103	-	48,991	-	334,231	272,880	714,205
Slate sold	5,686,956	-	-	-	-	995,258	6,682,214
Marble (dimension stone) sold	1,127,615	4,425,779	565,970	-	11,892	173,823	6,305,079
Marble (crushed and broken) sold	37,501	65,807	12,544	103,744	31,443	132,544	383,583
Total marble sold	1,165,116	4,491,586	578,514	103,744	43,335	306,367	6,688,662
Phosphate rock, sold	-	11,749,962	-	-	544,080	-	12,294,042
Basalt and related rocks	7,655,760	332,110	-	-	4,872,174	680,092	13,540,136
Sulphur 6/	-	-	-	35,145,000	355,000	-	35,500,000
Sandstone (dimension stone)	1,536,254	79,913	9,532	-	229,856	100,640	1,956,195
Sandstone (crushed and broken)	5,381,814	2,096,012	1,066,939	104,431	740,195	400,045	9,789,436
Total sandstone	6,918,068	2,175,925	1,076,471	104,431	970,051	500,685	11,745,631
Gypsum mined	1,806,085	-	510,120	473,768	896,934	744,098	4,431,005
Fluorspar (shipped from mines)	1,638,693	1,773,063	-	-	293,203	-	3,704,959
Barite	-	810,726	1,163,870	-	-	369,507	2,344,103
Crude feldspar	289,253	497,930	133,893	-	145,199	46,582	1,112,857
Talc, pyrophyllite, and ground soapstone sold	1,631,017	461,670	-	-	485,064	123,083	2,700,834
Miscellaneous stone (dimension stone)	65,688	7,125	-	-	5,023	2/ 645,497	723,333
Miscellaneous stone (crushed and broken)	2,646,785	508,393	36,525	503,101	3,026,150	7/ 1,105,455	7,826,409
Total miscellaneous stone	2,712,473	515,518	36,525	503,101	3,031,173	1,750,952	8,549,742
Portland cement shipped	76,636,772	12,304,242	22,344,564	12,152,780	31,825,785	25,057,658	180,321,811
Lime	19,352,794	3,161,877	3,342,166	524,748	2,138,507	8/ 1,529,302	30,049,394
Salt	16,003,677	-	2,591,934	3,434,964	2,183,021	238,377	24,451,973

(Continued)

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Table 3-C.—Value of Nonmetals Sold or Used by Producers, by Freight Rate Territories, 1/ 1939 (Continued)

Item	Territory						United State total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	Undistributed	
	(Percent of U. S.)						
Limestone (dimension stone)	65.79	1.88	11.62	12.34	0.20	2/ 8.17	100.00
Limestone (crushed and broken)	55.11	19.25	18.48	4.45	2.38	3/ 0.33	100.00
Total limestone	55.87	18.02	17.99	5.01	2.23	.88	100.00
Sand and gravel	47.22	8.31	11.26	6.61	21.37	4/ 5.23	100.00
Granite (dimension stone)	57.63	18.77	18.89	2.18	2.13	0.40	100.00
Granite (crushed and broken)	14.09	64.53	1.88	0.06	16.41	3.03	100.00
Total granite	33.13	44.52	9.32	0.99	10.16	1.88	100.00
Clay sold:							
Kaolin	2.65	90.31	-	-	1.80	5.24	100.00
Ball clay	2.31	93.38	-	-	-	4.31	100.00
Fire clay	58.41	10.44	20.20	0.59	9.51	0.85	100.00
Bentonite	-	-	12.79	8.70	54.10	24.41	100.00
Fuller's earth	-	61.18	-	21.22	-	17.60	100.00
Miscellaneous clay	8.13	-	6.86	-	46.80	38.21	100.00
Slate sold	85.11	-	-	-	-	14.89	100.00
Marble (dimension stone) sold	17.88	70.19	8.98	-	0.19	2.76	100.00
Marble (crushed and broken) sold	9.78	17.15	3.27	27.05	8.20	34.55	100.00
Total marble sold	17.42	67.15	8.65	1.55	0.65	4.58	100.00
Phosphate rock sold	-	95.57	-	-	4.43	-	100.00
Basalt and related rocks	56.54	2.45	-	-	35.99	5.02	100.00
Sulphur 6/	-	-	-	99.00	1.00	-	100.00
Sandstone (dimension stone)	78.53	4.09	0.49	-	11.75	5.14	100.00
Sandstone (crushed and broken)	54.97	21.41	10.90	1.07	7.56	4.09	100.00
Total sandstone	58.90	18.53	9.16	0.89	8.26	4.26	100.00
Gypsum mined	40.76	-	11.51	10.69	20.24	16.80	100.00
Fluorspar (shipped from mines)	44.23	47.86	-	-	7.91	-	100.00
Barite	-	34.59	49.65	-	-	15.76	100.00
Crude fledspar	25.99	44.74	12.03	-	13.05	4.19	100.00
Talc, prophyllite, and ground soapstone sold	60.39	17.09	-	-	17.96	4.56	100.00
Miscellaneous stone (dimension stone)	9.08	0.99	-	-	0.69	2/ 89.24	100.00
Miscellaneous stone (crushed and broken)	33.82	6.49	0.47	6.43	38.67	7/ 14.12	100.00
Total miscellaneous stone	31.73	6.03	0.43	5.88	35.45	20.48	100.00
Portland cement shipped	42.50	6.82	12.39	6.74	17.65	13.90	100.00
Lime	64.40	10.52	11.12	1.75	7.12	8/ 5.09	100.00
Salt	65.45	-	10.60	14.05	8.93	0.97	100.00

(Footnotes on next page)

Table 3-D. - Value of Production of Nonmetals sold or Used for States Divided by Freight Rate Territories, 1939

Item	Michigan	Wisconsin	Virginia	Louisiana	Colorado
			(Dollars)		
Limestone (dimension stone)	1/	342,510	641	-	4,832
Limestone (crushed and broken)	5,539,316	1,874,654	3,654,589	1/	205,592
Total limestone	5,539,316	2,217,164	3,655,230	1/	210,424
Sand and gravel	4,087,508	2,616,204	1,425,708	1,195,049	2/ 361,747
Granite (dimension stone)	-	645,651	1/	-	9,238
Granite (crushed and broken)	-	84,156	610,456	-	70,220
Total granite	-	729,807	610,456	-	79,458
Clay sold:					
Kaolin	-	-	1/	-	-
Ball clay	-	-	-	-	-
Fire clay	-	-	1/	-	72,644
Bentonite	-	-	-	-	-
Fuller's earth	-	-	-	-	1/
Miscellaneous clay	1/	-	-	1/	78,159
Slate sold	-	-	1/	-	-
Marble (dimension stone) sold	-	-	1/	-	1/
Marble (crushed and broken) sold	-	-	1/	-	-
Total marble sold	-	-	1/	-	1/
Phosphate rock sold	-	-	3/	-	-
Basalt and related rocks	113,511	1/	227,365	-	1/
Sulphur 4/	-	-	-	-	-
Sandstone (dimension stone)	-	9,532	9,283	-	14,108
Sandstone (crushed and broken)	1/	464,827	307,361	-	154,138
Total sandstone	1/	474,359	316,644	-	168,246
Gypsum mined	834,856	-	1/	-	40,604
Fluorspar (shipped from mines)	-	-	-	-	107,459
Barite	-	-	1/	-	1/
Crude feldspar	-	-	100,299	-	107,536
Talc, pyrophyllite, and ground soapstone sold	-	-	1/	-	-
Miscellaneous stone (dimension stone)	-	-	1/	-	-
Miscellaneous stone (crushed and broken)	225,342	1/	1/	1/	136,162
Total miscellaneous stone	225,342	1/	1/	1/	136,162
Portland cement shipped	10,891,978	1/	1/	1/	1/
Lime	324,765	541,787	990,796	-	103,097
Salt	6,726,912	-	1/	2,830,351	1/

1/ Included in "Undistributed."
2/ Output of Government-and-contractor operations included under "Undistributed".
3/ Included with Tennessee. Total of the two states - $3,856,505.
4/ Not available by states.

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Source: Minerals Yearbook, 1940.

[fol. 5529] In order to check these rankings of the territories on a value basis, actual quantities sold, used, or shipped were compiled for all those non-metallic minerals having a value greater than 5 million dollars in 1939. These figures, which are presented in Table 3-E, indicate that the rankings of the major items is the same when quantities, rather than values, are compared.

Only one grouping of the states divided by freight rate territory boundaries has been presented, in which Michigan was assigned to Official, Wisconsin to Western Trunk Line, Virginia to Southern, Louisiana to Southwestern, and Colorado to Mountain-Pacific territory. Figures for the five states are listed separately in Tables 3-D and 3-F so that the total effect of a reclassification of states may be computed.

Secondary Metal Reserves

Characteristics and Significance of Secondary Metal Reserves

No discussion of the distribution of the primary reserves of iron and nonferrous metals by freight rate territories can be regarded as complete without some consideration being given to the secondary reserves of these metals. In the case of iron and steel, copper, and lead, the extensive recovery of these metals in secondary form greatly affects the volume of production of the virgin metal and thereby tends to prolong the life of the existing reserves of these metals in the form of ore. Pehrson, Acting Chief of the Economics and Statistics Branch of the Bureau of Mines, speaking in 1938 with regard to the Bureau of Mines' figures, stated that "The record shows that from 1907 to 1936, inclusive, approximately 9,000,000 tons of copper, 5,000,000 tons of lead, 3,500,000 tons of zinc, 635,000 tons of tin, and 682,000 tons of aluminum have been reclaimed from various cycles of use."[1]

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[1] E. W. Pehrson, Conservation Aspects of Secondary Metals, presented at the Convention of the National Association of Waste Material Dealers, at New York, March 15, 1938, Bureau of Mines release of even date (mimeographed), p. 3.

Table 3-E.--Nonmetals Produced, Sold, or Used by Producers by Freight Rate Territories 1/, 1939

Item	Unit	Territory: Official	Southern	Western Trunk Line	South-Western	Mountain-Pacific	Undistributed	United States total
Limestone (dimension stone) sold or used	Approx. sh.tons	643,200	19,490	203,690	71,460	3,400	2/ 119,430	2/ 1,060,670
Limestone (crushed and broken) sold or used	Sh.tons	56,597,830	17,760,530	17,707,410	5,200,580	1,946,270	3/ 437,230	3/ 99,649,850
Total limestone sold or used	Approx. sh.tons	57,241,030	17,780,020	17,911,100	5,272,040	1,949,670	556,660	100,710,520
Sand and gravel sold or used	Sh.tons	75,346,596	14,324,980	30,320,383	13,273,955	42,986,751	18,523,536	194,776,201
Granite (dimension stone) sold or used	Approx. sh.tons	504,360	150,150	55,380	7,590	4,750	11,380	733,610
Granite (crushed and broken) sold or used	Sh.tons	1,641,400	7,508,170	215,460	9,890	1,615,880	316,950	11,307,750
Total granite sold or used	Approx. sh.tons	2,145,760	7,658,320	270,840	17,480	1,620,630	328,330	12,041,360
Kaolin sold	Sh.tons	49,657	682,151	-	-	19,481	29,515	780,804
Fire clay sold	Sh.tons	1,346,705	222,837	384,567	5,837	255,351	6,998	2,222,295
Slate sold 4/		-	-	-	-	-	-	-
Marble (dimension stone) sold	Approx. sh.tons	21,140	79,430	18,250	5/	350	4,570	123,740
Marble (crushed and broken) sold	Sh.tons	10,180	36,940	9,900	13,680	5,170	28,470	104,340
Total marble sold	Approx. sh.tons	31,320	116,370	28,150	13,680	5,520	33,040	228,080
Phosphate rock sold	Long tons	-	3,617,232	-	-	139,835	-	3,757,067
Basalt and related rocks sold or used	Sh.tons	8,102,650	315,880	5/	5/	6,702,800	497,580	15,618,910
Sandstone (dimension stone) sold or used	Approx. sh.tons	162,240	10,380	1,180	-	13,800	7,960	195,560
Sandstone (crushed and broken) sold or used	Sh.tons	4,440,560	2,067,120	680,600	146,130	823,170	500,540	8,658,120
Total sandstone sold or used	Approx. sh.tons	4,602,800	2,077,500	681,780	146,130	836,970	508,500	8,853,680
Miscellaneous stone(dimension stone) sold or used	Sh.tons	43,540	1,580	-	-	1,920	2/ 36,420	2/ 83,460
Miscellaneous stone (crushed and broken) sold or used	Sh.tons	1,839,620	433,530	58,660	817,140	4,725,640	6/ 1,428,620	6/ 9,303,210
Total miscellaneous stone sold or used	Sh.tons	1,883,160	435,110	58,660	817,140	4,727,560	1,465,040	9,386,670
Portland cement produced	Barrels	55,173,678	8,575,608	14,213,562	7,337,246	19,933,896	16,700,921	121,934,911
Lime sold or used	Sh.tons	2,634,762	535,719	581,278	62,048	241,261	7/ 199,280	7/ 4,254,348
Salt sold or used	Sh.tons	6,389,879	5/	641,752	1,424,548	472,789	335,618	9,264,586

(Continued)

Table 3-C. - Value of Non-Metals Sold or Used by Producers, by Freight Rate Territories, 1/ 1939 (Continued)

1/ States divided by freight rate territory boundaries were apportioned to territories as follows:

Michigan - Official territory
Wisconsin - Western Trunk Line territory
Virginia - Southern territory
Louisiana - Southwestern territory
Colorado - Mountain-Pacific territory.

For figures for these five states, see Table

2/ Includes Puerto Rico.
3/ Includes Hawaii.
4/ Includes commercial production of Alaska.
5/ Includes $174,144 of diaspore and burley clay in Missouri.
6/ Value represents value shipped and is distributed to territories on the basis of production (99% and 1%). Figures do not include sulphur recovered as a by-product.
7/ Includes Puerto Rico and Alaska.
8/ Includes Puerto Rico and Hawaii.

Source: Minerals Yearbook, 1940.

Table 3-E.—Nonmetals Produced, Sold, or Used by Producers by Freight Rate Territories 1/, 1939 (Continued)

Item	Territory						United States total
	Official	Southern	Western Trunk Line	Southwestern	Mountain-Pacific	Undistributed	
	(Percent of U. S.)						
Total limestone sold or used	56.84	17.65	17.78	5.24	1.94	2/3/ 0.55	2/3/ 100.00
Sand and gravel sold or used	38.68	7.35	15.57	6.82	22.07	9.51	100.00
Total granite sold or used	17.82	63.60	2.25	0.14	13.46	2.73	100.00
Kaolin sold	6.36	87.37	-	-	2.49	3.78	100.00
Fire clay sold	60.60	10.03	17.31	0.26	11.49	0.31	100.00
Total marble sold	13.73	51.02	12.34	5/ 6.00	2.42	14.49	100.00
Phosphate rock sold	-	96.28	-	-	3.72	-	100.00
Basalt and related rocks sold or used	51.88	2.02	5/	5/	42.91	3.19	100.00
Total sandstone sold or used	51.99	23.47	7.70	1.65	9.45	5.74	100.00
Total miscellaneous stone sold or used	20.06	4.64	0.62	8.71	50.36	6/ 15.61	6/ 100.00
Portland cement produced	45.25	7.03	11.66	6.02	16.35	13.69	100.00
Lime sold or used	61.93	12.59	13.66	1.46	5.67	7/ 4.69	7/ 100.00
Salt sold or used	68.97	5/	6.93	15.38	5.10	3.62	100.00

1/ States divided by freight rate territory boundaries were allocated to territories as follows:
Michigan - Official territory
Wisconsin - Western Trunk Line territory
Virginia - Southern territory
Louisiana - Southwestern territory
Colorado - Mountain-Pacific territory

2/ Incldues Puerto Rico.
3/ Includes Hawaii.
4/ Data in ... not reported by States.
5/ Included in "Undistributed."
6/ Includes Alaska and Puerto Rico.
7/ Includes Hawaii and Puerto Rico.

Source:
United States Department of the Interior, Bureau of Mines, "Mineral Yearbook", 1940, Washington: Government Printined Office, 1940.

Table 3-F. - Nonmetals Produced, Sold, or Used by Producers in the States Divided by Freight Rate Territory Boundaries, 1939

Item	Unit	Michigan	Wisconsin	Virginia	Louisiana	Colorado
Limestone (dimension stone) sold or used	Approx. sh. tons	1/	55,520	1,280	-	190
Limestone (crushed and broken) sold or used	Sh. tons	10,882,350	2,678,400	4,051,670	1/	230,720
Total limestone sold or used	Approx. sh. tons	10,882,350	2,733,920	4,052,950	1/	230,910
Sand and gravel sold or used	Sh. tons	10,748,007	7,024,722	2,639,790	2,145,793	2/ 627,306
Granite (dimension stone) sold or used	Approx. sh. tons	-	14,730	1/	-	480
Granite (crushed and broken) sold or used	Sh. tons	-	64,520	724,540	-	104,250
Total granite sold or used	Approx. sh. tons	-	79,250	724,540	-	104,730
Kaolin sold	Sh. tons	-	-	1/	-	-
Fire clay sold	Sh. tons	-	-	-	-	52,310
Marble (dimension stone) sold	Approx. sh. tons	-	-	1/	-	1/
Marble (crushed and broken) sold	Sh. tons	-	-	-	-	-
Total marble sold	Approx. sh. tons	-	-	1/	-	1/
Phosphate rock sold	Long tons	-	-	3/	-	-
Basalt and related rocks sold or used	Sh. tons	109,530	1/	228,990	-	1/
Sandstone (dimension stone) sold or used	Approx. sh. tons	-	1,180	4,970	-	2,750
Sandstone (crushed and broken) sold or used	Sh. tons	1/	241,640	329,020	-	162,020
Total sandstone sold or used	Approx. sh. tons	1/	242,820	333,990	-	164,770
Miscellaneous stone (dimension stone) sold or used	Sh. tons	-	-	1/	-	-
Miscellaneous stone (crushed and broken) sold or used	Sh. tons	140,920	1/	1/	1/	161,670
Total miscellaneous stone sold or used	Sh. tons	140,920	1/	1/	1/	161,670
Portland cement produced	Barrels	8,218,760	1/	1/	1/	1/
Lime sold or used	Sh. tons	45,180	64,290	166,542	-	10,699
Salt sold or used	Sh. tons	2,408,872	-	1/	1,072,540	1/

1/ Included in "Undistributed".
2/ Output of government-and-contractor operations included under "Undistributed".
3/ Included with Tennessee. Total for two states, 938,448 tons.

Source: United States Department of the Interior, Bureau of Mines, "Minerals Yearbook," 1940, Washington: Government Printing Office, 1940.

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[fol. 5533] Over a period of scores of years the processes of production have built up large reserves of some metals in the form of the various finished products into which they enter. Some of these reserves are, of course, subject to serious depletion in use. Just as mine losses reduce the supply of metal obtainable from ore, so are the reserve stocks of metals represented in durable goods in the hands of consumers subject to depletion. Up to the end of 1932 Ingalls estimated that the total deliveries of copper for consumption aggregated 20 million tons, of which 2.9 million tons had been exported, leaving 17.1 million tons for domestic consumption. As of the end of 1932 he was able to account for only 10.1 million in the inventories of metal in use, leaving a total of 7 million tons as lost.[1]

In the case of iron and steel an immense tonnage is lost in every year through rusting.[2] Much of the lead and copper that go into bearing metal may be assumed to be lost by dissipation through wear. Ingalls estimated that for railway equipment there are about 200,000 tons of copper in journal bearings and bushings in the form of copper-lead-tin-bronze alloy containing about 75 per cent copper. Every year about 80,000 tons of this has to be replaced and every year the junk amounts to around 60,000 tons leaving about 20,000 tons of loss by wear or otherwise to be replaced.[3] Other losses occur through similar or other forms of dissipation. White and red lead for pigment, and tetraethyl for tempering gasoline are lost by dissipation and the same is true of copper used for oxides and sulphates.[4] Another important source of loss is what may [fol. 5534] be termed the dispersing uses of many of these metals. In a chemical sense, for example, copper is an indestructible metal but in a mechanical sense the scattering of many of the articles in use is so extensive that recollection as secondary metal is impracticable. This is true, for example, of the copper in pins and fastenings, rivets, ma-

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[1] W. R. Ingalls, The Economics of Old Metals, Especially Copper, Lead, Zinc and Tin, Bulletin 235, Mining and Metallurgical Society of America, Vol. XXVIII, No. 4, 1935, p. 77.

[2] Ibid, p. 92.

[3] Ibid, p. 78

[4] Ibid., pp. 78 and 86.

chine and wood screws, bolts, and nuts, spark plugs, incandescent lamp bulbs and sockets, drapery, hardware, harness, and saddlery hardware, domestic ornaments and utensils, buttons, badges and a host of other small articles.[1]

Zinc is much more susceptible to losses of these types than copper and so also is tin. The principal uses of zinc are for galvanizing, brass making, die casting, oxides and sheets. Sheets in turn are used chiefly for battery cans and fruit jar tops. All of these products except brass and die casts are put to essentially dissipating or dispersing uses.[2] Aluminum "like copper experiences some dissipating and dispersing uses of different degrees. So far as we can go in the analysis of conditions in aluminum this metal appears to follow the habits of copper."[3]

Information regarding the size of these secondary reserves of metals is exceedingly scanty. About the only available figures which are compiled in any degree of detail are those for iron and steel. At least one estimate for copper given above has also been made. For the other metals no estimates have been attempted. In the following pages, however, the readily available data on the relative impor- [fol. 5535] tance of primary and secondary production of iron and steel and the principal nonferrous metals have been assembled together with information bearing on the probable distribution of these secondary reserves by freight rate territories.

Importance of Secondary Ferrous Metals

Estimates of the reserves of iron and steel represented in products in use in the United States in 1936 aggregated in excess of one billion tons or more than 17,800 pounds per capita. From 1900 to 1930 the amount of steel in use grew steadily at an average rate of about 440 pounds per capita

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[1] Ibid., p. 78. The larger part of the loss, according to Pehrson, "is probably copper used in the fabrication of small articles that have become so widely dispersed in use that their collection is unprofitable." E. W. Pehrson, Conservation Aspects of Secondary Metals, Address at Annual Convention of the National Association of Waste Material Dealers at New York, March 15, 1938, p. 3 (mimeographed).

[2] Ingalls, op. cit., p. 88.

[3] Ibid., p. 86.

per year. During the depression there was a substantial decrease in this rate of accumulation and in fact in 1932 there was a net decline. After that year, however, the increase was resumed at the lower rate of 300 pounds per capita per annum, although in 1935 it was 507 pounds.[1] By 5-year periods 1903-1937 iron ore consumption per ton of steel produced has declined uninterruptedly from 1.5305 tons in the first quinquennium to .9353 tons in the last.[2]

In the five years 1910-1914 the percentage ratio of the consumption of iron and steel scrap to steel production never rose as high as 52 per cent. Between 1920 and 1937 the ratio has never been below 60 per cent, and between 1925 and 1937 never below 65 per cent, and between 1931 and 1937 never below 70 per cent.[3]

The scrap represented in these figures includes both plant scrap originating in the steel plants and in the processes of steel production and which is continuously being recycled in such plants and scrap which is purchased by the steel companies. Purchased scrap includes both new scrap originated by manufacturer of products using steel, i.e., automobiles and used or old scrap originating from a wide variety of sources. The division of total scrap between "plant" or "home" scrap and "purchased" or "other" scrap has been approximately half and half in recent [fol. 5536] years.[1] However, not all of the purchased scrap represents drafts on the secondary metal reserves. This is because plants engaged in the production of iron and steel products, notably the automobile industry, originate vast quantities of new scrap which are sold and returned to the steel furnaces each year.

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[1] Steel Facts, April 1936, p. 5, and May 1937, p. 4.

[2] Report of the Interstate Commerce Commission to the President of the United States on Certain Aspects of the proposed Lake Erie-Ohio River Canal, 235 I.C.C. 798, Table 5.

[3] Table 6, ibid., p. 799.

[1] In 1937 home scrap was 27.6 per cent of the total ferrous scrap and pig iron consumed in the United States, and purchased scrap 25.2 per cent. In 1938 the percentages were 28.4 and 25.2, respectively. Minerals Yearbook, 1939, p. 515.

The Bureau of Mines reported to the Military Affairs Committee of the Senate in 1937 that "The reservoir of iron in use in this country from which our annual scrap supply is withdrawn, is enormous. * * * Moreover, the amount of metal added to the reservoir in that year (1937) was considerably more than that withdrawn. It may be conservatively estimated that, in 1937, 35,000,000 tons of steel products were added to the store of metal in use, whereas the total scrap withdrawn for domestic consumption and for export probably did not exceed 25,000,000 tons. Thus, in a year of unprecedented scrap exports our reservoir of potential scrap was actually increased by 10,000,000 tons." [2]

Importance of Secondary Nonferrous Metals

The Ingalls figure quoted above of 10 million tons of copper in use in 1932 is about the only figure of secondary reserves for any of the nonferrous metals. As already pointed out, therefore, indications of the importance of secondary reserves of these metals must be gleaned from the figures of secondary production in comparison with the primary production or imports where there are no reserves. Table 4, therefore, presents by three-year periods from 1914 the primary and secondary production of copper, lead, zinc, and aluminum and the secondary production and imports of nickel and tin.

[fol. 5537] II-20

Over the entire period of 26 years secondary copper shows the highest ratio to primary production (58.24 percent). Lead and aluminum are about equal with between 41 and 42 percent and zinc is lowest with only 34 percent. In terms of tonnage, secondary aluminum, production is not of great importance at the present time possibly because the use of aluminum in large quantities is comparatively recent and sufficient time has not been allowed for the accumulation of large quantities of scrap.

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[2] Statement of Bureau of Mines on the Proposed Embargo on Exports of Iron and Steel Scrap, Hearings before a Subcommittee of the Senate Committee on Military Affairs on S. 2025 and S. J. Res. 180 (Scrap Iron and Steel), 75th Cong., 1st Sess., 1937, p. 79.

Although we have practically no tin or nickel ore reserves,[1] supplies of secondary metal are of some importance and should perhaps be considered in any estimate of resources. While the ratio of secondary nickel to imports at 8.55 percent for the period is the lowest of the ratios shown by Table 4, the secondary tin figure of 35.80 percent of imports is about the same as the relation of secondary to primary zinc production. For copper, aluminum and lead it would appear that secondary metal is assuming a greater and greater importance. For zinc, tin, and nickel there is less, if any, such indication. These apparently different tendencies are accounted for, of course, chiefly by differences in the character of the consumption of the various metals with resulting differences in the rates of recovery or recycling of the metals as well as in what proportion of the total volume going into consumption can ultimately be recovered.

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[1] Regarding tin, "The country • • • has been able to produce only an average of 7 tons per year for the last 15 years as compared to the average imports of 70,000 tons per year." "There has been no nickel ore mined within the boundaries of the United States since 1909 • • • if strong efforts were made • • • without regard to price or commercial availability perhaps 2,000 or 3,000 tons of metallic nickel in ore could be produced. This opposed to a probable consumption of about 19,000 tons per year • • • is not important." (Leith and Liddell, op. cit., pp. 219, 172).

Table 4. Relation of Nonferrous Secondary to Primary Metal Production or Imports, Three-year Averages, 1914-1939

(Short tons)

Period	Copper 1/			Lead 1/		
	Total domestic primary production	Total secondary production	Percent secondary of primary	Total domestic primary production	Total secondary production	Percent secondary of primary
1914-16	2,243,441	674,019	30.04	1,572,048	236,262	15.03
1917-19	2,594,953	1,023,260	39.43	1,512,788	312,700	20.67
1920-22	1,348,254	865,660	64.21	1,343,817	387,990	28.87
1923-25	2,410,637	1,219,410	50.58	1,765,169	625,870	35.46
1926-28	2,621,024	1,506,400	57.47	1,975,207	861,900	43.64
1929-31	2,224,281	1,440,750	64.77	1,636,498	801,500	48.98
1932-34	696,237	963,680	138.41	814,794	631,200	77.47
1935-37	1,806,036	1,465,600	81.15	1,141,345	808,400	70.83
1938-39(2 yrs.)	1,257,447	859,500	68.35	752,931	466,400	61.94
Total	17,202,310	10,018,279	58.24	12,514,597	5,132,222	41.01

Period	Zinc 2/			Aluminum 3/		
1914-16	1,365,891	322,600	23.62	131,792	32,322	24.53
1917-19	1,529,274	399,300	26.11	191,530	49,841	26.02
1920-22	1,001,551	395,000	39.44	133,103	40,690	30.57
1923-25	1,579,797	477,000	30.19	209,669	92,300	44.02
1926-28	1,780,476	518,000	29.09	260,769	138,200	53.00
1929-31	1,393,493	406,600	29.11	317,276	117,300	36.97
1932-34	868,524	285,600	32.88	132,094	103,900	78.66
1935-37	1,469,670	4/		318,454	165,460	51.96
1938-39(2 yrs.)	953,577	4/		306,986	88,800	28.93
Total	11,942,253			2,001,673	828,813	41.41

Period	Tin 5/			Nickel 6/		
	Total primary imports	Total secondary production	Percent secondary of primary	Total primary imports	Total secondary production	Percent secondary of primary
1914-16	174,357	43,497	24.95	82,174	-	-
1917-19	188,270	67,270	35.73	92,706	4,700	5.07
1920-22	157,312	59,910	38.08	33,916	4,657	13.73
1923-25	235,916	92,459	39.19	60,541	6,090	10.06
1926-28	253,424	106,099	41.87	67,500	10,930	16.19
1929-31	261,996	80,301	30.65	81,900	9,320	11.38
1932-34	155,146	61,750	39.80	52,300	4,950	9.46
1935-37	255,810	86,240	33.71	130,300	6,315	4.85
1938-39(2 yrs.)	134,177	52,680	39.26	90,996	5,220	5.74
Total	1,816,408	650,206	35.80	692,333	52,182	7/ 8.55

(See next page for footnotes)

[fol. 5539] II-22

(Footnotes for Table 4.)

[1] Figures for 1914-1934 from Minerals Yearbook, 1936, p. 349. Figures for 19351939 from Minerals Yearbook, 1940.

[2] Figures for 1914-1934 from Minerals Yearbook, 1936, p. 349. Primary figures for 1935-1939 from Minerals Yearbook, 1940, p. 132.

[3] "Power Requirements in Electrochemical, Electrometallurgical and Allied Industries," from Bureau of Mines figures, Federal Power Commission, Washington, 1938, p. 20, for figures through 1936. Figures for 1937-1939 from Minerals Yearbook, 1940, p. 638.

[4] Not available.

[5] Figures from Minerals Yearbooks.

[6] Figures from Minerals Yearbook, 1939, p. 604 for 1914-1938; Minerals Yearbook 1940, p. 605 and 494 for 1939.

[7] 1917-1939 only.

[fol. 5540] II-23

Much of the secondary metal represented in these figures does not constitute any contribution from the secondary metal reserves but consists of "home" or "run around" scrap. In other words the processes of production of machinery, equipment and other articles produce a certain amount of scrap in the form of clippings and cuttings, borings, skimmings, spinnings, and sweepings, the quantity of which in each year varies directly with the volume of production. Manufacturing scrap of this character is principally and usually new scrap and is constantly recycled. Except for the fluctuations in its total volume each year this scrap possesses little or no economic significance. Old scrap, on the other hand, comes from the reserves of metal in use. For this reason ratios of old scrap to primary production are of greater significance than are those of new scrap and it is these reserves of old scrap with which this study is concerned.

Until recently no attempt has been made to separate the consumption of old scrap representing drafts on the secondary reserves of metal in use from those of new scrap which may be said to constitute a more or less permanent part of the nation's manufacturing inventory. Unfortu-

nately only a beginning has been made on the collection of data on old and new scrap except copper. For 1939, however, the Bureau of Mines has made a separation for each of the principal nonferrous metals under consideration. These figures are shown in Table 5 in comparison with the primary production of copper, lead, zinc, and aluminum and with imports in the case of nickel and tin. The figures for the single year are, of course, apt to be misleading.

As already stated, the volume of new scrap is chiefly manufacturing scrap, which fluctuates directly with the volume of industrial production. The volume of old scrap appearing in the market in any year, however, is influenced by the price of scrap and consequently may not be so directly related to the volume of production. The figures for only a single year, therefore, may indicate a degree of importance for either old or new scrap with reference to the primary production which would not be borne out by the figures for a longer period. It will be noted, for example, that the ratio of old copper to primary production, for the 5-year period 1934-1938 greatly exceeds that for the single year 1939 when there was a sharp rise in the production of primary with consequent increase in the proportion of new scrap to the total. In that year, [fol. 5541] therefore, the ratio of old scrap to primary production was less than 41 percent as compared with 66 percent on the basis of the average for the preceding five years.

Except for zinc, aluminum, and nickel, the tonnages of old scrap are fairly impressive and would indicate that the secondary reserves of old metal are highly important to industry.

The foregoing ratios of old scrap to primary production or imports are explainable very largely in terms of the purposes for which these various metals are consumed and the character of this consumption taken in connection with certain other statistical data sheds some light upon the location of these secondary metal reserves.

(There follows 1 Photolithograph side folio 5542)

[fol. 5543] *Relation of Metal Consumption to Growth of Secondary Reserves*

Copper

Table 6 shows the average consumption of copper, 1934-1938, by uses. Five sources of consumption accounted each for in excess of 9 percent of the average consumption of copper in the 5 years 1934-1938, electrical manufactures (23.22 percent) automobiles (13.32 percent), other rod and wire [1] (10.45 percent) light and power lines (9.49 percent) and buildings (9.04 percent). These uses, therefore, accounted for nearly two-thirds (65.52 percent) of the total consumption. Most of this copper is recoverable. in addition, it is probable that the great bulk of the copper going into telephones and tellegraphs (4.06 percent) is recoverable and much, if not most, of that used in shipbuilding and railway equipment. There is a large recovery from radio sets, air conditioning equipment, radiators, and refrigerators. Most of the copper in "castings (n.e.s.)" ammunition, and a large proportion of that in miscellaneous other uses is definitely nonrecoverable because of dissipation, dispersion or both. [2]

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[1] See note 3 to table.

[2] The above figure of 65.52 percent of the copper going into consumption in 1934-1938 from which high proportions of recovery are likely may be compared with the Ingalls estimate quoted above. It will be recalled that he estimated that 17.1 million tons had gone into domestic consumption, of which 10.1 tons were in use and 7 million had been lost up to the end of 1932. This is a ratio of a trifle over 59 percent in use as compared with a little over 40 percent lost. If we allow something for recovery from other than the five principal uses specified above and for losses in the five principal use- and highly recoverable groups it would appear that the proportion of copper going into secondary reserves in the five years 1934-1938 may not perhaps be very far from the Ingalls estimate to the end of 1932.

Table 5.--Relation of Secondary Production from New and Old Scrap to Primary Production from Domestic Ores or Imports of Principal Nonferrous Metals

Metal	Primary production of imports	Secondary production			Percent of primary production or imports		
		New scrap	Old scrap	Total	New scrap	Old scrap	Total scrap
	(Short tons)	(Short tons)					
Production from domestic ores							
Copper, 1939	704,873	212,800	286,900	499,700	30.19	40.70	70.89
Copper, 5-yr. aver., 1934-1938	518,332	94,260	346,300	440,560	18.19	66.81	85.00
Lead, 1939	420,967	30,700	210,800	241,500	7.29	50.08	57.37
Zinc, 1939	491,058	144,540	45,100	189,640	29.43	9.18	38.62
Aluminum, 1939	163,545	15,100	34,900	50,000	9.23	21.34	30.57
Imports							
Tin, 1939	78,514	12,300	16,860	29,160	15.67	21.47	37.14
Nickel, 1939	1/ 64,796	1,910	1,010	2,920	2.95	1.56	4.51

1/ Includes nickel ore and matte, oxide, ingots, bars, rods, tubes, etc.

Source: Copper, lead, and zinc figures for 1939 by telephone from E. W. Pehrson, Bureau of Mines; aluminum, tin, and nickel figures for 1939 by letter dated September 11, 1940, from T. H. Miller, Acting Supervising Engineer, Secondary Metals Section, U. S. Mines; copper figures for 1934-1938 from Minerals Yearbook, 1939.

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[fol. 5544]

Table 6.—Estimated Average Use of Copper in the United States, 1934-1938

Use	5-yr. average (Short tons)	Percent of total
Electrical manufactures [1]	151,000	23.22
Telephones and telegraphs	26,400	4.06
Light and power lines [2]	61,700	9.49
Wire cloth [3]	5,900	.91
Other rod and wire [3]	68,000	10.45
Ammunition	13,140	2.02
Automobiles [4]	86,600	13.32
Buildings [5]	58,800	9.04
Castings, n.e.s. [6]	36,400	5.60
Clocks and watches	3,000	.46
Copper-bearing steel	3,100	.48
Radiators, heating	1,640	.25
Radio receiving sets	18,620	2.86
Railway equipment [7]	3,340	.51
Refrigerators [8]	13,260	2.04
Shipbuilding [8]	4,340	.67
Air conditioning [8 9]	5,660	.87
Other uses [10]	55,280	8.50
Manufactures for export	34,160	5.25
Total	650,340	100.00

Source: Minerals Yearbook, 1939, p. 106.

[1] Generators, motors, electric locomotives, switchboards, light bulbs, etc.

[2] Transmission and distribution wire and busbars; accounting only for the public-utility companies.

[3] Includes industrial wire and cable, wire in buildings, railway cars and ships, radio broadcasting, railway and municipal signaling, railway electrification, trolley wire, rod and wire for Government projects, blasting wire, flexible cord, and sundries.

[4] Does not include starter, generator, and ignition equipment.

[5] Excludes electrical work.

[6] Bearings, bushings, lubricators, valves, and fittings.

[7] Includes air conditioning.

[8] Excludes electrical equipment.

[9] Other than railway.

[10] Includes condenser tubes, oil-burner tubing, welding rod, screw-machine products, nickel-silver and phosphor bronze products, rivets and burrs, toilet pins, eyelets and grommets, electrotyping and engraving sheet, spark plugs, inner-tube valve stems, jar tops and rouge boxes, flashlight tubes, kerosene lamps, kitchen utensils, kitchen-range boilers, linotype matrices, safety razors, blasting caps, asbestos textiles, water meters, thermostats, soldering coppers, yacht fittings, coinage, washing machines, household water heaters, fire extinguishers, etc., all reckoned in terms of copper content.

[fol. 5545] These use characteristics of copper combined with its highly indestructible character physically account, no doubt, for the large tonnages of old scrap going into consumption each year.

Lead

During the five years 1934-1938 approximately 31 percent of the total lead consumed in the United States was used in storage batteries (Table 7). Ingalls, speaking in 1935,

concluded that "the 24 million automobiles that we have on the road carry about 300,000 tons of lead" in the form of battery plates. "From the number of automobiles we have on the road, the average battery weight and the average battery life," he calculated that "we ought to get back 110,000 tons of lead per annum."[1]

Next to battery lead the most important source of secondary lead is said to be cable scrap,[2] a use which accounted

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[1] Ingalls, op. cit., pp. 86-88. Certain other estimates have been very much higher. In the nonferrous metals cases F. R. Wampler estimated that on December 1, 1929, there were 26,501,443 automobiles registered in the United States with an average battery lead weight of 25 pounds—a total of 357,769 tons of battery lead. This witness figured that the average life of a storage battery was 18 months and that approximately 238,000 tons of automobile battery plates were annually subject to recovery. Record, Rate Structure Investigation, I. C. C. Docket 17,000, Non Ferrous Metals, Part 12, p. 3960. Even on the 18-month basis, this last figure is probably much too high. Thus it was also testified in the same case that the lead yield on burnt out battery plates was from only 65 to 70 percent "the remainder being non-reclaimable and worthless." (Sidney R. Lewis, ibid., p. 4819). And information from the Bureau of Mines would indicate that recovery at the present rate would not exceed 80 percent. Also at the present time a life of 18 months may well be too low for the average of all batteries.

[2] Ingalls, op. cit., p. 87.

[fol. 5546]

Table 7.—Lead Consumed in the United States, by Use, Average 1934-1938

Use	5-yr. average (Short tons)	Percent of total
White lead	77,400	13.41
Red lead and litharge	48,700	8.44
Storage batteries	177,600	30.78
Cable covering	57,100	9.90
Building	36,600	6.34
Automobiles	9,280	1.61
Railway equipment	1,800	.31
Shipbuilding	240	.04
Ammunition	33,440	5.80
Terneplate	4,840	.84
Foil	20,860	3.62
Bearing metal	13,120	2.27
Solder	19,000	3.29
Type metal	14,800	2.56
Calking	12,500	2.17
Castings	5,550	.96
Other uses	44,200	7.66
Total	577,030	100.00

Yearbook of the American Bureau of Metal Statistics, 1938, p. 56. These estimates are for the total consumption of lead irrespective of whether its origin is primary or secondary. Antimonial lead is included.

[fol. 5547] for less than 10 percent of the average consumption of lead in the five-year period 1934-1938. However, Ingalls in 1935 believed that a national inventory of lead in use would show the largest quantity to be in cables.[1]

The only other purposes which absorbed in excess of 5 percent of the total in this quinquennium were in buildings (6.34 percent), in white lead (13.41 percent), red lead and litharge (8.44 percent), and ammunition (5.80 percent).

As indicated above, battery scrap is a very important source of secondary lead. Lead in buildings is already recoverable as is also lead in cables and much of that going into minor channels of consumption for solder, automobiles, railway equipment, shipbuilding and type metal. Lead used for white and red lead and litharge is practically all dissipated as is also a good deal of that in bearing metal as a result of abrasion. Lead in ammunition is presumably almost entirely lost through dispersion as is also much of that represented in terne plate, foil, and collapsible tubes.[2] The high ratio of old lead scrap to primary production in 1939, therefore (Table 5) is due primarily to the volume of

[1] Ingalls, op. cit., p. 87.

[2] Ingalls, op. cit., p. 86.

battery scrap. Its elimination from the old scrap figures would, no doubt, reduce this metal from leadership in the ratio of old scrap to primary production to a position substantially below copper.[3]

Zinc

The two most important uses of zinc are for galvanizing and brass making. On the basis of the five-year average for the years 1934-1938 the former absorbed about 42.5 [fol. 5548] percent of the industrial zinc used in the United States and the latter not quite 27 percent (Table 8). Most of the recovery of zinc from brass is not in the form of zinc but as brass, the zinc content of which replaces a corresponding amount of spelter which would otherwise go into brass making. Other important uses are for die casting (12.10 percent) and in rolled zinc (10.50 percent).

Zinc consumption in die casting has grown to an average of 59,100 tons per annum for the five years 1934-1938 from only 13,500 tons in 1926, the first year for which this use was separately reported by the Bureau of Mines.[1] In 1935 die castings absorbed 73 percent more zinc than in the preceding year[2] and in 1937 the consumption was more than 2½ times that of 1934.[3] This abrupt increase reflected a marked increase in zinc used by the automobile industry where zinc castings are used in a great variety of parts—hardware, carburetors, fuel pumps, radiator grilles. Some 1936 models contained as much as 80 pounds of zinc die castings.[2] Die casting industry estimates of 1941 consumption made late in 1940 were 155,000 tons.[4]

As compared with either copper or lead, relatively high proportions of zinc go into nonrecoverable uses and of the

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[3] Cf. Ingalls' conclusion (op. cit., p. 88) that "If we eliminate the storage battery cycle the reflux of old lead from use appears to be less in terms of percentage than in the instance of copper. If on the basis of 1929 consumption the reflux of old copper was something like 18 percent, that of old lead may have been about 8 to 10 percent."

[1] Yearbook of the American Bureau of Metal Statistics, 1929, p. 79.

[2] Minerals Yearbook, 1936, p. 168.

[3] Minerals Yearbook, 1938, p. 143.

[4] Letter of Bureau of Mines dated Dec. 4, 1940.

secondary zinc that is recovered, according to Ingalls, there is but little reconversion into spelter.[5] A very substantial part of the zinc ore produced in the United States is used directly in the manufacture of pigments and chemicals from which there is pratically no recovery. Thus the 42.5 percent of the zinc used for galvanizing in 1934-1938 is widely dispersed, and there is little or no recovery therefrom.

[fol. 5549]

Table 8.—Estimated Average Industrial Use of Zinc in the United States, 1934–1938

Use	5-yr. average (Short tons)	Percent of total
Galvanizing:	207,800	42.55
Sheets	113,760	23.29
Tubes	29,860	6.12
Wire	26,320	5.39
Wire cloth	5,520	1.13
Shapes [1]	32,340	6.62
Brass making	131,600	26.95
Rolled zinc	51,280	10.50
Die castings	59,100	12.10
Other uses [2]	38,600	7.90
Total	488,380	100.00

Source: Yearbook of the American Bureau of Metal Statistics, 1938, p. 76.

[1] Includes pole-line hardware, hollow ware, chains, and all articles not elsewhere mentioned.

[2] Includes slab zinc used for manufacture of French oxide, zinc for wet batteries, slush castings, the desilverization of lead, and sundries.

[fol. 5550] Rolled zinc is utilized chiefly for such products as battery cans and fruit jar tops,[1] which are also highly dispersing. As a result of this situation, the secondary reserves of zinc are relatively small as compared with those of copper or lead and the chief source of secondary metal is new scrap.[2] This is indicated by a comparison of the figures of old and new scrap from the various nonferrous metals in 1939 (Table 5). In that year old copper, lead, and aluminum scrap either substantially or greatly exceeded new scrap, the ratios of old scrap to the total old and new scrap being, respectively, 57.41, 87.29, and 69.80 percent. In the case of zinc, on the other hand, the volume of new

[5] Ingalls, op. cit., p. 88.

[2] E. W. Pehrson, at the Twenty-Third Annual Convention of the National Ass'n of Waste Material Dealers, Inc., quoted in Minerals Yearbook, 1936, Part II, p. 350.

scrap greatly exceeded the old, the latter representing only 23.78 percent of the total of both old and new.

Tin

There is every indication that there are no important reserves of secondary tin and that the great bulk of it represents merely run-around scrap recovered from industrial plants.[3] "Among all the nonferrous metals tin is preeminently the one that is associated with the production of consumption goods rather than of constructional or durable goods."[4] About 40 percent of the consumption of the United States is in tin plate (Table 9) and Ingalls estimated in 1935 that about 75 percent of the tin plate was used for canning. Old tin cans and tin plate are primarily dissipating and dispersing uses. The next most important

[fol. 5551]

Table 9.—Average Consumption of Tin in the United States, 1935–1938, by Finished Products (Tin Content)

Use	4-yr. average (Long tons)	Percent of total
Tin plate [1]	30,952	40.91
Terneplate	1,195	1.58
Solder	17,013	22.49
Babbitt	5,690	7.52
Bronze	5,362	7.09
Collapsible tubes [2]	3,526	4.66
Tinning	2,224	2.94
Foil [2]	1,414	1.87
Chemicals (other than tin oxide)	1,851	2.45
Pipe and tubing [3]	1,170	1.54
Tin oxide	1,193	1.58
Type metal	1,167	1.54
Galvanizing	856	1.13
Bar tin	658	.87
Miscellaneous alloys	431	.57
White metal	401	.53
Miscellaneous	554	.73
Total	75,657	100.00

Source: Minerals Yearbooks, 1940, p. 685; 1939, p. 681.

[1] Includes small quantity of pig tin derived from detinning operations; Bureau of Mines not permitted to publish separate figures.

[2] Small quantity included under "Miscellaneous."

[3] In 1935 pure tin tubing required 940 tons and tin-lined tubing 13 tons; in 1936, 1,476 and 7 tons, respectively; in 1937, 1,286 and 10 tons, respectively; not reported separately after 1937.

[fol. 5552] use of tin is in solder, which is also largely scattered. All the chemical uses are essentially dissipating.

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[3] E. W. Pehrson and John B. Umhau, Minerals Yearbook, 1939, p. 679. Also Ingalls, op. cit., pp. 89-90.

[4] Ingalls, op. cit., p. 89.

Collapsible tubes and foil are largely scattered and babbitt metal wears out. The principal reclamation, according to Ingalls, is from solder and this chiefly from automobile radiators.[1]

Bronze is apparently another source of secondary tin. About 60,000 tons of bronze junk are returned annually from journal bearings and bushings.[2]

In view of these conclusions of competent students, it is of some interest, therefore, to note that despite this fact the old tin scrap represented a substantially higher proportion of the total scrap than did new scrap in 1939, the only year for which we have separate figures of old and new scrap. According to the Bureau of Mines this is due largely to the tin circulating in bronze scrap.

Aluminum

As pointed out above, Ingalls has suggested that the reflux of aluminum is similar to that of copper. This implies that in contrast to zinc and tin most of the production goes into use in those industries which sooner or later return all or part of it in the form of scrap. The data on aluminum consumption by industries is exceedingly scanty but for 1936 and for the period 1933-1938 the Bureau of Mines has published estimated proportions of primary aluminum consumed by various industries. The figures are as follows:

[fol. 5553]

Table 9A.—Uses of Aluminum

Use	1936 [1] (Percent)	1933-1938 [2] (Percent)
Transportation (air, land, water)	20	29
Machinery	18	15
Cooking utensils	13	14
Miscellaneous foundry and metal working	13	4
Electrical conductor	12	10
Iron and steel metallurgy	5	5
Chemical	3	5
Building	3	8
Food and beverage	...	6
Miscellaneous, including food products	13	...
General miscellaneous	...	4
	100	100

[1] Minerals Yearbook, 1938, p. 586.
[2] Minerals Yearbook, 1940, p. 650.

[1] Ibid., pp. 78, 90.

[2] Letter dated December 4, 1940, from E. W. Pehrson, Acting Chief, Economics and Statistics Branch, U. S. Bureau of Mines, Dr. W. H. S. Stevens, I. C. C.

On their face those figures would appear to support the Ingalls theory and to indicate the accumulation of substantial secondary reserves of metal. Presumably the chemical use, the miscellaneous uses, including food products, and iron and steel metallurgical consumption are definitely dissipating. These uses, however, combined add up to only about 20 percent of the total shown, assuming there was no recovery from any of them. On the other hand, considerably over half of the total is consumed in the machinery, transportation, electric conduction, and building industries from which recovery is quite large. Recovery from cooking utensils is of a high order too.[3] It has been stated officially that the Aluminum Company of America estimates "that 60 to 75 percent of the original ingot eventually reappears as secondary aluminum."[4] For some of these products re- [fol. 5554] covery may be complicated by the fact that the aluminum used goes into the product produced in the form of alloys. For the 10 years 1927-1936 secondary supply of aluminum was 32 percent of the total domestic supply whereas secondary copper was 43 percent of total domestic consumption of copper.[1] The difference may be due to the fact that aluminum is a new metal as compared with copper. Supporting this view, the Federal Power Commission stated in 1938 that the situation "suggests that the amount of secondary aluminum will increase slowly for perhaps 10 years, more rapidly thereafter."[1]

Nickel

Figures on the quantities of nickel going into various uses are not available. World figures in a pamphlet by Robert Stanley, "The Nickel Industry in 1937" published by the International Nickel Company would indicate that the bulk of it is used in conjunction with other metals. According to his figures, 55 percent of the total was used in nickel steels. Monel, malleable nickel, nickel clad, and Iconel absorbed 12 percent and electro deposition 10 percent. Nickel alloys accounted for most of the balance. The 1939 figures (Table 5) do not indicate that there are at

[3] Letter dated Dec. 4, 1940, from E. W. Pehrson, op. cit.

[4] Federal Power Commission, Power Requirements in Electrochemical, Electrometallurgical and Allied Industries, 1938, p. 31.

[1] Ibid., p. 31.

present significant tonnages of secondary metal accumulating.[2] No further consideration, therefore, is given to this metal in this study.

[fol. 5555] *Reserves of Secondary Metals by Freight Rate Territories*

Information regarding the location of these secondary metal reserves and their relative importance as between different freight rate territories is of the most fragmentary character. A limited amount of information on rail movements of scrap is available in Interstate Commerce Commission figures. Various other statistics collected from miscellaneous sources which are separable according to freight rate territories also shed some light on the relative proportions of the secondary metal reserves available in the different freight rate territories. These statistics constitute about the only available information with regard to the probable location of the secondary metal reserves.

Secondary Metal Reserves in Buildings

In the five years 1934-1938 (6-year period for aluminum) the building industry absorbed the following percentage of iron and steel and the four principal nonferrous metals.

Table 10.—Proportion of Consumption of Specified Metals in Building, 1934-1938 [1]

Metal	Proportion
Iron and steel (structural shapes)[2]	8.33
Copper	9.04
Lead	6.34
Zinc	—
Aluminum	8.00

[1] For aluminum, 1933-1938.

[2] Annual Statistical Report of American Iron and Steel Institute for 1939, pp. 21-22. For other metals see Tables 6, 7, and 9A, supra.

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[2] Up to the end of the World War, however, the chief use of nickel was for armament purposes. It is only during the last 20 years that there has been any very serious effort to adapt the unique properties of nickel to peace time uses. Minerals Yearbook, 1938, pp. 552-553.

[fol. 5556] No entirely satisfactory figures of the number of structures for the United States are available by states and even if they were, the number alone would not be an entirely satisfactory index of the volume of such metals in such buildings owing to the great differences in size of the units involved. However, the number of establishments is available by states for the manufacturing industry and from these and other figures also available on a state basis it is possible to piece together some rather definite ideas as to the probable distribution of the secondary metal reserves in buildings by freight rate territories. As the number of manufacturing establishments gives no indication of the sizes involved, the average number of wage earners employed in manufacturing in 1937 has been shown for each freight rate territory as a check on the establishment figures. For hotel structures the number of rooms by rate territories has been taken to indicate the extent of metallic reserves available in this type of structure and the number of family units has been used as a similar indicator of the number of dwelling units and the proportion of metal included in such structures. For the relative importance of metallic reserves located in business structures other than hotels and manufacturing establishments, such as office buildings, warehouses, wholesale and retail establishments, and the like, the number of people gainfully employed in clerical occupations and in trade has been used. Tables 11 and 12 show the distribution of these figures by freight rate territories. Two groupings of states have been used for the freight rate territories since these territories do not follow state lines. These groupings are sufficiently indicated in the footnotes to the table.

These figures would suggest that in excess of 45 per cent of the secondary metallic reserves of iron and steel, copper, lead, zinc, and aluminum in buildings are located in Official territory. Leadership for the remaining territories depends primarily on the kind of structure. Mountain-Pacific far exceeds the others in terms of hotel rooms as indicative of secondary metal reserves in hotel buildings, followed by Western Trunk Line, Southern, and Southwestern. Though Western Trunk Line leads in number of manufacturing establishments, Southern leads in the number of

Table 11.--Relative Importance of Building Structures in the United States, by Freight Rate Territories

Grouping A

Territory	Manufactures, 1937 1/		Hotel structures (Hotel guest rooms) 1935 2/	Office, trade and other business structures (Gainfully employed in clerical occupations, and trades, 1930 3/	Dwelling units (No. of families) 1930 4/
	No. of establishments	No. of wage earners			
Official 5/	102,872	6,137,962	657,131	6,166,834	15,479,668
Southern 6/	15,480	970,432	138,918	860,429	4,312,364
Western Trunk Line 7/	20,152	640,243	169,641	1,205,049	4,029,770
Southwestern 8/	8,582	272,339	110,102	713,094	2,868,262
Mountain-Pacific 9/	19,708	548,205	352,854	1,159,365	3,214,599
Total	166,794	8,569,231	1,428,646	10,105,791	29,904,663
	Percent of total				
Official 5/	61.68	71.63	46.00	61.04	51.76
Southern 6/	9.28	11.32	9.72	8.51	14.42
Western Trunk Line 7/	12.08	7.47	11.87	11.92	13.48
Southwestern 8/	5.14	3.18	7.71	7.06	9.59
Mountain-Pacific 9/	11.82	6.40	24.70	11.47	10.75
Total	100.00	100.00	100.00	100.00	100.00

1/ Statistical Abstract of the U. S., 1939, pp. 309-310.
2/ Ibid., p. 861.
3/ Abstract, Fifteenth Census of U.S., pp. 323-324.
4/ Statistical Abstract of the U. S., 1939, p. 48.
5/ Including Michigan and Virginia.
6/ Excluding Virginia and Louisiana.
7/ Including Wisconsin and excluding Colorado.
8/ Including Louisiana.
9/ Including Colorado.

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Table 12.--Relative Importance of Building Structures in the United States, by Freight Rate Territories (Continued)

Grouping B

Territory	Manufactures, 1937 1/		Hotel structures (Hotel guest rooms) 1935 2/	Office, trade and other business structures (Gainfully employed in clerical occupations, and trades, 1930 3/	Dwelling units (No. of families) 1930 4/
	No. of establishments	No. of wage earners			
Official 5/	100,488	6,005,319	640,120	6,039,724	14,950,579
Southern 6/	19,548	1,179,132	167,318	1,111,978	5,326,816
Western Trunk Line 7/	21,335	666,175	195,429	1,290,062	4,297,094
Southwestern 8/	6,898	196,332	98,713	590,655	2,382,899
Mountain-Pacific 9/	18,475	522,273	327,066	1,074,372	2,947,275
Total	166,734	8,569,231	1,428,646	10,106,791	29,904,663
	Percent of total				
Official 5/	60.25	70.08	44.81	59.76	49.99
Southern 6/	11.72	13.76	11.71	11.00	17.81
Western Trunk Line 7/	12.82	7.77	13.68	12.77	14.37
Southwestern 8/	4.13	2.29	6.91	5.84	7.97
Mountain-Pacific 9/	11.08	6.10	22.89	10.63	9.86
Total	100.00	100.00	100.00	100.00	100.00

1/ Statistical Abstract of the U. S., 1939, pp. 809-810.
2/ Ibid., p. 661.
3/ Abstract, Fifteenth Census of U. S., pp. 323-324.
4/ Statistical Abstract of the U.S., 1939, p. 46.
5/ Including Michigan.
6/ Including Virginia and Louisiana.
7/ Including Wisconsin and Colorado.
8/ Excluding Louisiana.
9/ Excluding Colorado.

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[fol. 5559] manufacturing wage earners, and it may be conjectured that somewhat larger reserves of metal are probably to be found in Southern territory. Southwestern territory is definitely lowest in both respects.

Gauged by gainfully employed in clerical occupations and trades, there are more secondary metal reserves in Western Trunk Line business structures, outside of manufacturing establishments and hotels, than in any territory other than Official. Mountain-Pacific territory falls in third place, followed by Southern and Southwestern territories. In number of dwelling units, Western Trunk Line territory ranks second followed by Southern, Mountain-Pacific and Southwestern territories in the order named.

Automobile Secondary Metal Reserves

Large tonnages of the four principal nonferrous metals—copper, lead, zinc, and aluminum—enter annually into the manufacture of automobiles as well as millions of tons of iron and steel.

In the five-year period 1935-1939 the average volume of consumption of each of these metals and the average quantity and proportion of this total consumption used by the automobile industry was as follows:

Annual Average of 1935-1939 [1]

Metal	Total United States consumption (Tons)	Consumption in automobile industry (Tons)	Percent of total consumption
Iron and steel	[2] 33,676,717	[3] 5,967,112	17.7
Copper	716,400	116,140	16.2
Aluminum	163,100	20,560	12.6
Lead	614,290	210,200	34.2
Zinc	539,800	67,560	12.5

[1] Automobile Facts and Figures, 1936-1940.

[2] Hot rolled iron and steel produced, in net tons (Annual statistical report of the American Iron and Steel Institute for 1939, p. 23).

[3] Steel and malleable iron only in 1937. Steel, malleable and gray iron other years.

[fol. 5560] Automobile metal, however, partakes of the nature of a more or less permanent revolving inventory. As already pointed out, this is particularly true of lead since the average life of a battery is much less than the average life of an automobile and most of the lead consumed by the automobile industry is in the form of battery plate. Although the total metal in automobiles is large, the comparatively short life of motor vehicles results in a

high rate of scrappage. This means that there is comparatively little long-term accumulation of secondary reserves and that automobile metal represents at best the equivalent of only a few years consumption by that industry. These statements are subject to the qualification that the total metal in use is perhaps slowly increasing with the increased number of automobiles in use. Despite the decline in motor vehicle registrations in the early stages of the depression from 1931 to 1933, registrations in 1939 were more than 4 million cars above those of 1929, or roughly one-sixth greater.[1]

For estimating the quantities of automobile secondary metal reserves by freight rate territories the motor vehicle registration figures would appear to be fairly satisfactory. Table 13, therefore, shows the distribution of these registration figures for the five freight rate territories according to the two groupings A and B referred to above.

These registration figures indicate that nearly 50 percent of the secondary metal reserves in automobiles are in Official territory. Western Trunk Line is second followed closely by the Mountain-Pacific division. Southern territory is fourth and Southwestern last.

Secondary Reserves in Electrical and Other Machinery

Table 6 above indicated that on the basis of the five-year period 1934-1938 about twenty-three percent of the total copper was being used in electrical manufactures such as

[1] Automobile Facts and Figures, 1940, p. 11. This possible increase in metal is, of course, subject to qualification for any decreased weights which may have occurred.

(Here follows 1 Photolithograph, side folio 5561)

Table 13.--Distribution of Motor Vehicles Registrations by Freight Rate Territories, 1938 1/

Territory	Number	Percent of total
Grouping A		
Official 2/	14,744,934	50.01
Southern 3/	3,010,552	10.21
Western Trunk Line 4/	4,574,874	15.51
Southwestern 5/	2,630,332	8.92
Mountain-Pacific 6/	4,524,988	15.35
United States	29,485,680	100.00
Grouping B		
Official 7/	14,303,472	48.51
Southern 8/	3,778,213	12.81
Western Trunk Line 9/	4,907,648	16.64
Southwestern 10/	2,304,133	7.82
Mountain-Pacific 11/	4,192,214	14.22
United States	29,485,680	100.00

1/ Automobile Facts and Figures, 1939, p. 17.
2/ Including Michigan and Virginia.
3/ Excluding Virginia and Louisiana.
4/ Including Wisconsin and excluding Colorado.
5/ Including Louisiana.
6/ Including Colorado.
7/ Including Michigan.
8/ Including Virginia and Louisiana.
9/ Including Wisconsin and Colorado.
10/ Excluding Louisiana.
11/ Excluding Colorado.

[fol. 5562] generators, motors, electric locomotives, switchboards, light bulbs, etc. It is not clear whether copper in buildings includes the copper in switchboards. If included, it may probably be assumed that the building indicators in the table above would give a rough approximation of the probable location of the reserves of secondary metal in this use.

For the rate territory distribution of secondary reserves of copper the capacity of prime movers in 1938 has been taken as an index of the location of this metal and these figures are given in Table 14.

As all electric motors are dependent upon current, it is probably not unfair to assume that distribution of secondary reserves of copper in motors would correspond roughly with the distribution of copper in generators. Also, electric switchboard copper would presumably be located roughly according to the distribution of prime movers. If, therefore, prime mover capacity be accepted as a reasonably good indicator of the location of secondary reserves of copper used in electrical manufacturing, Official territory would account for close to 57 percent of the total. On this basis Mountain-Pacific is a poor second with about 15 percent and Southern territory slightly leads Western Trunk Line.

Large quantities of iron and steel, aluminum, and copper are also used in machinery and miscellaneous equipment other than electrical. Machinery took about 15 percent of the aluminum, based on the average for the six years 1933-1938, and copper used in "castings, n.e.s.", for bearings, bushings, lubricators, valves, and fittings utilized 5.60 percent of the copper in the 1934-1938 period. No figures of the iron and steel tonnage going into machinery, either electrical or otherwise, are available. The total is unquestionably large, however. Distribution of the secondary reserves of these metals in machinery and equipment other than electrical by rate territories would presumably follow the corresponding distributions of manufacturing establishments and manufacturing wage earners shown in Table 11 above.

Table 14.—Distribution of Prime Mover Capacity in Generating Plants, 1938

Territory	Thousands of kilowatt-hours	Percent of total
Grouping A		
Official 1/	22,426	57.44
Southern 2/	4,489	11.50
Western Trunk Line 3/	3,999	10.24
Southwestern 4/	1,926	4.93
Mountain-Pacific 5/	6,201	15.89
United States	39,041	100.00
Grouping B		
Official 6/	21,928	56.17
Southern 7/	5,318	13.62
Western Trunk Line 8/	4,284	10.97
Southwestern 9/	1,595	4.09
Mountain-Pacific 10/	5,916	15.15
United States	39,041	100.00

1/ Including Michigan and Virginia.
2/ Excluding Virginia and Louisiana.
3/ Including Wisconsin and excluding Colorado.
4/ Including Louisiana.
5/ Including Colorado.
6/ Including Michigan.
7/ Including Virginia and Louisiana.
8/ Including Wisconsin and Colorado.
9/ Excluding Louisiana.
10/ Excluding Colorado.

Source: U. S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States. 1939, p. 379.

[fol. 5564] *Secondary Metal Reserves in Wire and Cable*

According to the foregoing tables, electric conduction absorbed about 10 percent of the aluminum from 1933 to 1938 and electric light and power lines took about the same percentage of the copper in the five-year period 1934-1938. Figures permitting the breakdown of secondary reserves of copper and aluminum in use in these forms are not readily available. While it is possible that there are sources through which estimates of this distribution could be procured, it was not felt that their importance was sufficient to justify the probable amount of time and expense involved.

It is possible that the distribution of electric conduction copper and aluminum may perhaps follow roughly the prime mover distribution but the vast development of rural electrification in the last few years as well as the increase in long distance transmission renders any such possibility a somewhat dubious one.

Although telephone wire accounts for only about 4 percent of the consumption of copper, there are just under 90 million miles of telephone cable and aerial wire in use, largely of copper and nearly 2.5 million miles of telegraph wire. Table 15 shows the distribution of the telephone wire mileage in cable and in total by freight rate territories compiled from state figures furnished by the Federal Communications Commission in September 1940. Similar figures for the distribution of telegraph wire are not available but the distribution is no doubt somewhat similar to that of the telephone wire. Assuming that this is a reasonably accurate index, therefore, a little less than two-thirds of the secondary reserves of copper are located in Official territory. The Mountain-Pacific section is second with around 11 or 12 percent. Western Trunk Line is third and Southern and Southwestern fourth or fifth depending on the grouping considered most valid.

During the five-year period, 1934-1938, lead cable covering consumed approximately 10 percent of the total lead. In 1935 Ingalls "supposed" that if a national inventory of lead in use were possible, the largest quantity would be

Table 15.—Miles of Wire of Telephone Companies, by Freight Rate Territories, 1939

Territory	Miles in cable	Percent of total	Miles all wire	Percent of total
Grouping A				
Official 2/	1/ 57,379,533	67.21	1/ 58,807,521	65.58
Southern 3/	4,777,332	5.59	5,455,637	6.09
Western Trunk Line 4/	7,934,523	9.29	8,844,459	9.86
Southwestern 5/	5,017,163	5.88	5,552,137	6.19
Mountain-Pacific 6/ ..	10,268,491	12.03	11,008,717	12.28
Total	85,377,042	100.00	89,668,471	100.00
Grouping B				
Official 7/	56,386,334	66.05	57,725,526	64.38
Southern 8/	6,532,791	7.65	7,380,750	8.23
Western Trunk Line 9/	8,579,853	10.05	9,595,479	10.70
Southwestern 10/	4,254,903	4.98	4,709,019	5.25
Mountain-Pacific 11/ .	9,623,161	11.27	10,257,697	11.44
Total	85,377,042	100.00	89,663,471	100.00

1/ Includes 19 miles of coaxial wire.
2/ Including Michigan and Virginia.
3/ Excluding Virginia and Louisiana.
4/ Including Wisconsin and excluding Colorado.
5/ Including Louisiana.
6/ Including Colorado.
7/ Including Michigan.
8/ Including Virginia and Louisiana.
9/ Including Wisconsin and Colorado.
10/ Excluding Louisiana.
11/ Excluding Colorado.

Source: Figures furnished by Federal Communications Commission, by letter of Mr. T. J. Slowie, Secretary, dated September 24, 1940.

[fol. 5566] found in cables.[1] Table 15 above indicates that a slightly higher proportion of telephone wire in cables than of all telephone wire is located in Official territory though still only about two-thirds of the total. The distribution of the secondary lead reserves in this cable in the other territories is, of course, the same as the distribution of copper reserves in telephone cable.

Secondary Reserves of Iron and Steel in Railways

The railways have always been a large source of iron and steel scrap. The figures of miles of road (Table 16) indicate that between 28 and 30 percent of the to[illegible]at the end of 1938 was located in Official territory. Large quantities of iron and steel are also in use in locomotives and in railway cars, particularly of the steel and steel underframe varieties. For these no satisfactory figures by freight rate territories are available. However, some idea of the situation in the matter of the ferrous metal reserves in this equipment may be gained from the Class I railway statistics of equipment for the Eastern, Southern, and Western Districts, the last named including practically all of the three freight territories lying west of the Mississippi River.

In the Commission's figures the Pocahontas region is included with the Southern District although most of this region lies in Official rate territory. For this reason cars and locomotives of the railroads assigned by the Commission to the three districts are shown in Table 17 on the basis, first, of the Commission's figures for these three districts, and then upon the basis of deducting the figures of the Pocahontas region from the Southern District and adding them to the Eastern District.

The lines assigned to the Eastern District, excluding Pocahontas, reported around 42 percent of the steam locomotives, nearly 45 percent of the freight-train cars and

[1] Ingalls, op. cit., p. 87.

Table 16.--Miles of Road Owned, All Line-Haul Steam Railways, by Freight Rate Territories, 1938

Territory	Miles of road	Percent of total
Grouping A		
Official 1/	72,130	30.45
Southern 2/	36,347	15.35
Western Trunk Line 3/	55,789	23.56
Southwestern 4/	31,995	13.51
Mountain-Pacific 5/	40,581	17.13
Total	236,842	100.00
Grouping B		
Official 6/	67,768	28.61
Southern 7/	45,158	19.07
Western Trunk Line 8/	60,430	25.51
Southwestern 9/	27,546	11.63
Mountain-Pacific 10/	35,940	15.18
Total	236,842	100.00

1/ Including Michigan and Virginia.
2/ Excluding Virginia and Louisiana.
3/ Including Wisconsin and excluding Colorado.
4/ Including Louisiana.
5/ Including Colorado.
6/ Including Michigan.
7/ Including Virginia and Louisiana.
8/ Including Wisconsin and Colorado.
9/ Excluding Louisiana.
10/ Excluding Colorado.

Source: I.C.C., Statistics of Railways in the United States, 1938, Table 3, p. S-5. Excludes Alaska and Hawaii.

Table 17. Locomotives and Cars of Class I Railway Companies, by Districts, 1938.

District	Steam locomotives 1/	Passenger-train cars: Total 1/	Passenger-train cars: Steel or steel underframe 2/	Freight-train cars: Total 1/	Freight-train cars: Steel or steel underframe 3/
			Grouping A 4/		
Eastern ..	17,793	20,565	20,060	5/770,817	758,392
Southern .	8,196	5,552	5,133	341,447	315,999
Western ..	16,648	13,192	11,717	6/609,734	547,325
Total	42,637	39,309	36,910	1,721,998	1,621,716
			Percent of total		
Eastern ..	41.73	52.32	54.35	44.76	46.76
Southern .	19.22	14.12	13.91	19.83	19.49
Western ..	39.05	33.56	31.74	35.41	33.75
Total	100.00	100.00	100.00	100.00	100.00
			Grouping B 7/		
Eastern ..	19,371	21,352	20,823	5/893,306	880,729
Southern .	6,618	4,765	4,370	218,958	193,662
Western ..	16,648	13,192	11,717	6/609,734	547,325
Total	42,637	39,309	36,910	1,721,998	1,621,716
			Percent of total		
Eastern ..	45.43	54.32	56.42	51.88	54.31
Southern .	15.52	12.12	11.84	12.71	11.94
Western ..	39.05	33.56	31.74	35.41	33.75
Total	100.00	100.00	100.00	100.00	100.00

1/ I.C.C. Statistics of Railways, 1938, Table 14, p. S-13, and Table 158, pp. S-170 to S-172.
2/ Ibid., Table 36, p. S-26. Pocahontas Region figures from I.C.C. work sheets.
3/ Ibid., Table 28, p. S-24. Pocahontas Region figures from I.C.C. work sheets.
4/ Pocahontas Region included in Southern District.
5/ Includes 10 idler, 2 incline tow, 13 poling, and 7 trainmen's office cars.
6/ Includes 1 caboose-baggage and 59 drover cars.
7/ Pocahontas Region included in Eastern District.

[fol. 5569] over 52 percent of the passenger-train cars. The Western District accounts for nearly 40 and about 35.4 and 33.5 percent of these totals, respectively, the Southern District showing less than 20 percent in any of the three classes of equipment. Regrouping the district figures to include the Pocahontas region in the Eastern District increases the proportion of steam locomotives and freight-train cars attributable to that region by several points percent and the proportion of passenger-train cars about 2 points percent.

In terms of steel or steel underframe cars, which presumably contain appreciably higher quantities of metal, the Eastern District shows roughly about two points per cent higher proportions of both passenger- and freight-train cars than in the totals of all cars of these classes.

—Location of Secondary Reserves of Metal as Indicated by Rail Movements of Scrap

Beginning with 1940 the Interstate Commerce Commission began the collection of commodity statistics by states of origin and termination. Iron and steel scrap was one of the classes of these commodities and at this writing figures for the first quarter of the year in question are available. Distribution of these figures by originating territory shown in Table 18 would indicate that in excess of 70 per cent of the iron and steel scrap originates in Official territory. With an exception for Western Trunk Line territory in Grouping B, the originations of other territories are all less than 10 per cent of the total. Official territory is also the only one showing a large surplus of terminations over originations, most of which surplus is apparently obtained from Western Trunk Line territory. The showing of this table is substantially confirmed by the scrap originations of the Eastern District for recent years shown in Table 19. Owing to possibly large movements by truck, however, the proportion of total scrap originations may vary substantially from those shown for rail carriers alone.

In the Rate Structure Investigation, I. C. C. Docket 17000, Part 12, a number of exhibits were

Table 18. Rail Originations and Terminations of Iron and Steel Scrap, by Freight Rate Territories, First Quarter 1940

Territory	Revenue tons originated		Revenue tons terminated		Excess	
	Amount	Percent of total	Amount	Percent of total	Originations over terminations	Terminations over originations
Grouping A						
Official 1/	1,745,905	72.82	1,872,685	78.65	-	126,780
Southern 2/	160,338	6.69	163,615	6.87	-	3,277
Western Trunk Line 3/	231,533	9.66	122,658	5.15	108,875	-
Southwestern 4/	141,121	5.89	121,302	5.10	19,819	-
Mountain-Pacific 5/	118,493	4.94	100,659	4.23	17,834	-
Total	2,397,390	100.00	2,380,919	100.00		
Grouping B						
Official 6/	1,706,566	71.19	1,851,162	77.75	-	144,596
Southern 7/	222,059	9.26	213,415	8.96	8,644	-
Western Trunk Line 8/	247,379	10.32	131,937	5.54	115,442	-
Southwestern 9/	118,739	4.95	93,025	3.91	25,714	-
Mountain-Pacific 10/	102,647	4.28	91,380	3.84	11,267	-
Total	2,397,390	100.00	2,380,919	100.00		

1/ Including Michigan and Virginia.
2/ Excluding Virginia and Louisiana.
3/ Including Wisconsin and excluding Colorado.
4/ Including Louisiana.
5/ Including Colorado.
6/ Including Michigan.
7/ Including Virginia and Louisiana.
8/ Including Wisconsin and Colorado.
9/ Excluding Louisiana.
10/ Excluding Colorado.

Source:
Interstate Commerce Commission, Bureau of Statistics, Tons of revenue freight originated and tons terminated in carloads by classes of commodities and by geographic areas, Class I steam railways, First quarter, 1940.

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Table 19 - Average Tonnage of Iron and Steel Scrap Originated and Terminated, by Districts, 1933-39

District	Tons originated	Tons terminated	Excess, originations over terminations (+); terminations over originations (-)
	(Tons of 2,000 pounds)		
Grouping A 1/			
Eastern	7,361,493	8,041,829	- 680,336
Southern	1,196,004	1,100,429	+ 95,575
Western	2,605,581	2,103,306	+ 502,275
Total	11,163,078	11,245,564	- 82,486
Percent of total			
Eastern	65.95	71.51	
Southern	10.71	9.79	
Western	23.34	18.70	
Total	100.00	100.00	
Grouping B 2/			
Eastern	7,706,371	8,437,190	- 730,819
Southern	851,126	705,068	+ 146,058
Western	2,605,581	2,103,306	+ 502,275
Total	11,163,078	11,245,564	- 82,486
Percent of total			
Eastern	69.03	75.03	
Southern	7.63	6.27	
Western	23.34	18.70	
Total	100.00	100.00	

1/ Pocahontas Region included in Southern territory.
2/ Pocahontas Region included in Eastern territory.

Source: I.C.C., Freight Commodity Statistics, 1935-1939, Commodity No. 693.

[fol. 5572] introduced on the nonferrous metals showing the originations of different kinds of scrap. These exhibits are fragmentary at best but as they appear to be all that is available, they are presented for whatever value they may have in throwing light upon the secondary reserves of nonferrous metals. Three exhibits show movements of scrap for April and October 1928 on a destination basis, as reported, respectively, by Western Trunk Line, Southwestern, and Transcontinental carriers (Tables 20, 21, and 22). Two show the territorial originations of scrap received at New England and two at Trunk Line points. Two other exhibits show originations of scrap metals moving from various producing points to consuming points in Illinois Freight Association and Central Freight Association territories, respectively, for the same months (Tables 24 and 25). These data would tend to confirm the showing of preceding tables as to the location of the secondary reserves of iron and steel and the nonferrous metals.

Table 20.--Originations of Scrap Metals as Reported by Western Trunk Line Carriers, April and October 1928

Territory of origin	Cars		Weight	
	Number	Percent of total	Amount	Percent of total
			(Pounds)	
Scrap Brass				
Official 1/	26	60.46	1,530,000	65.65
Western Trunk Line 2/	12	27.91	612,321	26.27
Southwestern	5	11.63	188,300	8.08
Total	43	100.00	2,330,621	100.00
Scrap Copper				
Official 1/	26	96.30	1,091,694	95.86
Western Trunk Line	1	3.70	47,100	4.14
Total	27	100.00	1,138,794	100.00
Scrap Lead				
Official 1/	7	50.00	389,380	46.39
Western Trunk Line	3	21.42	152,700	18.17
Southwestern	2	14.29	79,200	9.42
Mountain-Pacific	2	14.29	218,680	26.02
Total	14	100.00	840,460	100.00
Scrap Zinc				
Official	1	100.00	74,880	100.00

1/ Scrap from points in Illinois has in all cases been included under Official territory.

2/ Scrap from points in Iowa and Missouri has in all cases been included under Western Trunk Line territory.

Source: I.C.C. Docket 17,000, Pt. 12, Vol. 11, Exhibit 220, "Exhibit showing Movement of Non-Ferrous Metals as Reported by Western Trunk Line Carriers on a Destination Basis During the Months of April and October 1928", pp. 4, 7, 13, and 17.

Table 21.--Originations of Scrap Metals as Reported by Southwestern Carriers, April and October 1928

Territory of origin	Cars		Weight	
	Number	Percent of total	Amount	Percent of total
			(Pounds)	
Scrap Brass				
Western Trunk Line	1	16.67	36,500	15.98
Southwestern	5	83.33	191,974	84.02
Total	6	100.00	228,474	100.00
Scrap Copper and Brass				
Southwestern	5	100.00	189,317	100.00
Scrap Lead				
Western Trunk Line 1/	14	20.90	622,720	22.27
Southwestern 2/	53	79.10	2,174,110	77.73
Total	67	100.00	2,796,830	100.00

1/ Scrap from points in Iowa and Missouri has in all cases been included under Western Trunk Line territory.

2/ Scrap from points on the line between Southern and Southwestern territories has been included under Southwestern territory if being shipped west.

Source: I.C.C. Docket 17,000, Pt. 12, Vol. 11, Exhibit 221, "Exhibit Showing Movement of Non-Ferrous Metals as Reported by Southwestern Carriers on a Destination Basis During the Months of April and October 1928," pp. 2. 4.

Table 22.--Originations of Scrap Metals in the United States as Reported by Trans-Continental Carriers, April and October 1928

Territory of origin	Cars		Weight	
	Number	Percent of total	Amount (Pounds)	Percent of total
Scrap Brass				
Official 1/	13	35.14	743,420	36.34
Western Trunk Line	12	32.43	527,960	25.81
Southwestern	1	2.70	41,000	2.00
Mountain-Pacific	11	29.73	733,460	35.85
Total	37	100.00	2,045,840	100.00
Scrap Copper and Copper Wire				
Official 1/	6	40.00	382,600	44.90
Western Trunk Line 2/	5	33.33	227,540	26.71
Southwestern	1	6.67	63,900	7.50
Mountain-Pacific	3	20.00	178,000	20.89
Total	15	100.00	852,040	100.00
Scrap Copper and Brass				
Official 1/	1	6.25	38,400	5.21
Western Trunk Line	9	56.25	395,740	53.64
Southwestern	4	25.00	133,300	18.07
Mountain-Pacific	2	12.50	170,300	23.08
Total	16	100.00	737,740	100.00
Scrap Lead				
Official 1/	2	3.17	108,993	2.71
Western Trunk Line 2/	13	20.64	659,459	16.43
Southwestern	1	1.59	30,000	.75
Mountain-Pacific	47	74.60	3,215,520	80.11
Total	63	100.00	4,013,972	100.00
Scrap Zinc				
Mountain-Pacific	1	100.00	30,000	100.00
Scrap Tin				
Mountain-Pacific	3	100.00	235,000	100.00
Scrap Aluminum				
Western Trunk Line	1	100.00	31,140	100.00

(See following page for footnotes)

(Footnotes for Table 22)

1/ Scrap from points on the line between Official and Western Trunk Line territory has been included under Official territory if being shipped east. Scrap from points in Illinois has in all cases been included under Official territory.

2/ Scrap from points in Iowa and Missouri has in all cases been included under Western Trunk Line territory.

Source: I.C.C. Docket 17,000, Pt. 12, Vol. 11, Exhibit 222, "Exhibit Showing Movement of Non-Ferrous Metals as Reported by Trans-Continental Carriers on a Destination Basis During the Months of April and October 1928," pp. 5-7, 12-13, 17, and 19.

Table 23. - Originations of Scrap Metals Received at New England and Trunk Line Points, April and October 1928

Territory of origin	Cars		Weight	
	Number	Percent of total	Amount	Percent of total
			(Pounds)	
Scrap Brass				
Official	427	95.95	20,950,072	96.01
Southern	10	2.25	446,100	2.05
Western Trunk Line	8	1.80	424,080	1.94
Total	445	100.00	21,820,252	100.00
Scrap Copper				
Official	406	89.82	19,664,353	87.56
Southern	38	8.41	2,448,325	10.89
Western Trunk Line	8	1.77	347,880	1.55
Total	452	100.00	22,480,558	100.00
Scrap Lead				
Official	276	98.57	14,451,713	98.55
Southern	4	1.43	212,630	1.45
Total	280	100.00	14,664,343	100.00
Scrap Zinc				
Official	10	100.00	522,000	100.00
Scrap Tin				
Official	2	100.00	89,636	100.00

Source: I.C.C. Docket 17,000, Pt. 12, Vol. 2, Exhibit 55, "General Investigation of Rates on Non-Ferrous Metals, Statement of Carload Shipments of Brass, Bronze, Copper, Lead, Zinc & Tin Articles, Class Rate Shipments During Months of April and October 1928 Received at New England Points", p. 5; and Exhibit 56, Vol. 3, "General Investigation of Rates on Non-Ferrous Metals, Statement of Carload Shipments of Brass, Bronze, Copper, Lead, Zinc & Tin Articles, Commodity Rate Shipments During Months of April and October, 1928 Received at New England Points," p. 11; Vol. 3, Exhibit No. 57, "General Investigation of Rates on Non-Ferrous Metals, Statement of Carload Shipments of Brass, Bronze, Copper, Lead, Zinc & Tin Articles, Class Rate Shipments During Months of April and October, 1928 Received at Trunk Line Points, pp. 16-18; and Vol. 3, Exhibit 58, "General Investigation of Rates on Non-Ferrous Metals, Statement of Carload Shipments of Brass, Bronze, Copper, Lead, Zinc & Tin Articles, Commodity Rate Shipments During Months of April and October, 1928 Received at Trunk Line Points," pp.46-51.

Table 24. - Originations of Scrap Metals Moving from Various Producing Points to Consuming Points in Illinois Freight Association Territory, 1/ April and October 1928

Territory of origin	Cars		Weight	
	Number	Percent of total	Amount	Percent of total
			(Pounds)	
Scrap Brass				
Official 2/	76	88.37	3,777,958	90.29
Southern	8	9.30	312,200	7.46
Southwestern	2	2.33	94,200	2.25
Total	86	100.00	4,184,358	100.00
Scrap Copper				
Official 2/	34	91.89	2,117,093	94.03
Southern	1	2.70	36,000	1.60
Western Trunk Line	2	5.41	98,400	4.37
Total	37	100.00	2,251,493	100.00
Scrap Copper and Brass				
Official	7	58.33	329,200	59.16
Western Trunk Line	4	33.33	196,640	35.34
Southwestern	1	8.34	30,580	5.50
Total	12	100.00	556,420	100.00
Scrap Lead				
Official 2/	45	77.59	2,662,515	83.51
Southern 3/	10	17.24	373,667	11.72
Western Trunk Line	1	1.72	39,300	1.23
Southwestern	2	3.45	112,780	3.54
Total	58	100.00	3,188,262	100.00
Scrap Zinc				
Official 2/	8	100.00	611,300	100.00
Scrap Tin				
Official	1	50.00	43,185	51.48
Southern	1	50.00	40,700	48.52
Total	2	100.00	83,885	100.00

1/ Not including traffic from points in Western Trunk Line, Southwestern Freight Bureau and Trans-Continental Freight Bureau territories, to points in Illinois on and North of the A.T. & S.F. Ry., Chicago, to Pekin, Ill.; thence the Illinois River to its confluence with the Mississippi River, also Mississippi River points Grafton, Ill. to E. St. Louis, Ill., inc.

2/ Scrap from points on the line between Official and Western Trunk Line territories has been included under Official territory if being shipped east. Scrap from points in Illinois has in all cases been included under Official territory.

3/ Scrap from points on the line between Southern and Southwestern territories has been included under Southern territory if being shipped east.

Source: I.C.C. Docket 17,000, Pt. 12, Vol. 5 Exhibit 76A, "Actual Carload Movements of Non Ferrous Metals from Various Producing Points to Consuming Points in Illinois Freight Association Territory During the Months of April and October 1928 (Not including traffic from points in Western Trunk Line, Southwestern Freight Bureau and Trans-Continental Freight Bureau territories, to points in Illinois on and North of the A.T. & S.F. Ry., Chicago, to Pekin, Ill.; thence the Illinois River to its confluence with the Mississippi River, also Mississippi River points Grafton, Ill. to E. St. Louis, Ill., inc.) Together with Earnings Via Routes of Movement, also Via Short Line," pp. 3-5, 8, 9, 12-13, and 16.

Table 25. - Originations of Scrap Metals Moving from Points of Origin to Consuming Points in Central Freight Association Territory, April and October 1928

Territory of origin	Cars		Weight	
	Number	Percent of total	Amount (Pounds)	Percent of total
Scrap Brass				
Official 1/	106	97.25	5,283,022	97.22
Southern	3	2.75	151,312	2.78
Total	109	100.00	5,434,334	100.00
Scrap Copper				
Official	46	100.00	2,313,025	100.00
Scrap Copper and Brass				
Official	15	93.75	706,199	94.40
Southern	1	6.25	41,900	5.60
Total	16	100.00	748,099	100.00
Scrap Lead				
Official 1/	58	95.08	3,752,215	95.99
Southern 2/	3	4.92	156,900	4.01
Total	61	100.00	3,909,115	100.00
Scrap Zinc				
Official	3	100.00	149,000	100.00
Scrap Tin				
Official 1/	66	80.49	4,101,613	80.36
Southern 2/	14	17.07	890,660	17.45
Western Trunk Line	2	2.44	111,720	2.19
Total	82	100.00	5,103,993	100.00

(See following page for footnotes)

(Footnotes for Table 25)

1/ Scrap from points on the line between Official and Western Trunk Line territories is included under Official territory if being shipped east; from points on the line between Official and Southern territories is included under Official territory if being shipped north. Scrap from points in Illinois is all included under Official territory.

2/ Scrap from points on the line between Southern and Southwestern territories is included under Southern territory if being shipped east.

Source: I.C.C. Docket 17,000, Pt. 12, Vol. 4, Exhibit 68, "Actual Carload Movements of Non Ferrous Metals from Various Producing Points to Consuming Points in Central Freight Association Territory During the Months of April and October 1928 Together with Earnings Via Routes of Movement and Short Lines," pp. 10-11, 6, 12, 15-16, 21, and 25.

[fol. 5582]

CHAPTER III

Rate Territory Distribution of Energy Resources

Relative Significance of Energy Resources

The term "energy resources" as ordinarily used, refers to a replenishable source of energy, waterpower, and the minerals from which energy is usually derived, coal, petroleum, and natural gas, or presumably nonreplenishable sources. Before attempting to show the distribution of these sources of energy between the different freight rate territories, it may be well to gain some perspective of the relative importance of these resources. The declining production of coal during the last two or three decades and the enormous increases in petroleum production, as well as our much publicized public water power projects such as the Tennessee Valley, Boulder Dam, and Grand Coulee, have led in some instances to somewhat erroneous impressions as to the relative significance and importance of these energy resources for the economy as a whole.

Coal

The decline in the coal industry in recent years has been due in part to the extensive substitution of other forms of energy generation for coal, but also to the amazing strides that have been made in increasing the efficiency of coal utilization. Coal has been losing ground relatively since the early part of this century, though the actual quantities mined continued to increase until 1918.[1] At the peak of consumption, which occurred in that year coal supplied 82 per cent of the total energy derived from minerals and water power. By 1929 the proportion was down to 63 per cent, and by 1937, to 54 per cent.[2] Since 1923 the industry has been in a state of almost continuous depression. Despite this fact, coal remains the principal energy foundation stone of our industrial civilization, petroleum, natural gas, [fol. 5583] and water power following in the order named.[1]

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[1] National Resources Committee, Energy Resources Committee, "Energy Resources and National Policy," January 1939, p. 9.

[2] Ibid., p. 44.

[1] Ibid., p. 30.

In 1937 the Bureau of Mines placed the supply of energy derived from coal at 12,977 trillion b. t. u. (11,592 trillion b. t. u. from bituminous) as against 7,666 trillion from domestic petroleum and 2,526 trillion for natural gas, or a total of 10,357 trillion for the two latter.[2]

It is apparent, therefore, that in this fairly active industrial year energy derived from coal exceeded the combined total petroleum and natural gas by substantially 2,500 trillion units or more than 25 per cent of the total energy from the latter two sources. So far as reserves are concerned, coal represents practically 99 per cent of the total heat value of the nonreplenishable mineral sources of energy as is shown by Table 26.

Water Power versus Fuel Energies

Based on the 1913 equivalent of 4.02 pounds of coal per kilowatt-hour, the energy supplied by water power in 1937 would aggregate only 2,405 trillion b. t. u. or about 19 per cent of the quantity derived from coal. Based on the prevailing central station equivalent, however, the water power energy was equivalent to only 849 trillion b.t.u. in that year.[3] With water power at the prevailing central station equivalent of 1937, therefore, coal accounted for 53.66 per cent (bituminous, 47.93 per cent), oil and gas for 42.83 per cent, and water power for only 3.51 per cent of the total energy supply of 24,183 trillion b. t. u.[4]

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[2] Table 7, Minerals Yearbook, 1938, p. 703.

[3] Minerals Yearbook, 1938, p. 703. Between 1899 and 1937 the decline in pounds of coal consumed per kilowatt-hour was from about 7.05 to 1.42 (see note 4 to Table 7).

[4] Ibid. Using water power at a constant fuel equivalent (4.02 pounds per kilowatt-hour), the percentages for coal would be 50.42 (45.04 for bituminous), for oil and gas, 40.24, and for water power, 9.34 of a total energy supply of 25,739 trillion b. t. u. in that year. Ibid., particularly note 3 in Table 7 ibid.

(Here follows 1 photolithograph, side folio 5584)

Table 26. Reserves of Mineral Fuels and Their Importance in Terms of Heat Values 1/

Fuel	Proven reserves	Estimated heat value	
		Trillions of b.t.u.	Percent of grand total
	Tons		
Anthracite	15,415,622,000	395,557	0.6
Bituminous coal	1,407,808,291,000	38,578,947	56.9
Subbituminous coal	818,083,894,000	15,543,594	22.9
Lignite	939,457,443,000	12,588,730	18.6
Total coal	3,180,765,250,000	67,106,828	98.9
	Barrels		
Petroleum	15,500,000,000	97,650	0.1
	Cubic feet		
Natural gas	66,000,000,000,000	74,603	0.1
	Barrels		
Oil in shales	92,000,000,000	579,600	0.9
All fuels ...		67,858,681	100.0

1/ Energy Resources and National Policy, op. cit., Table 1, p. 54.

[fol. 5585] "'Based upon present practice in the installation of water wheels for the utilization of water power sites, it is estimated that water wheels having a capacity of about 80,000,000 horsepower would be required to utilize all of the water power in the United States.' This capacity would generate power equivalent to the combustion of 183,000,000 net tons of coal, if the capacity-use factor is taken at 48 percent (the average for a typical year) and the fuel consumption taken at 1.46 pounds per kilowatt hour (the average of central stations for 1935)."[1]

It was the opinion of a noted expert (Tryon) expressed in the Carter coal case that water power could never supply more than a minor fraction of the energy requirements of the country. Charles P. Steinmetz estimated that if every drop of water falling as rain in the United States could be transformed into power at the existing gradients, the quantity of energy would not equal that derived in good years from coal.[2] Calculations presented at the Third International Conference on Bituminous Coal indicated that the entire run-off of water, if put to work, would yield annually the energy equivalent to 437 million tons of coal.[3]

These estimates may be compared with the actual production of mineral fuel in the United States in 1929 which, including oil and gas, was equivalent to 920 million net tons of [fol. 5586] coal.[4] At the 1937 rate of utilization of capacity, the maximum output of potential water power would have been the equivalent of only 31 per cent of the coal tonnage used in that year.[1]

"The replenishable sources of energy, falling water, wood, wind, work animals, and synthetic fuels from

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[1] Rice, Fieldner, and Tryon, Conservation of Coal Resources, Third World Power Conference, Washington, 1936, Volume 6, Footnote 2, p. 672.

[2] Energy Resources Report, op. cit., p. 56.

[3] George A. Orrok, Economics of Water Power Versus Steam Power, Proceedings of the Third International Conference on Bituminous Coal, Carnegie Institute of Technology, 1932, Vol. 1, pp. 254-255.

[4] Rice, Fieldner and Tryon, op. cit., note 2, p. 672.

[1] Energy Resources and National Policy, op. cit., p. 57.

crops, do not have unlimited possibilities of expansion. Years of scientific investigation thus far have failed to discover means for giving these 'substitutes' for coal a major position in the market for energy. Their period of use, however, may be extended indefinitely. The possibility that any one of them will assume a major share of the burden carried by irreplaceable fuel seems remote, although, as a group, they may grow in importance as the cost of producing mineral fuels rises. * * * The safest assumption is that the most economical energy of the future will be derived from mineral deposits. Shorter life for oil and natural gas than for coal eventually will throw the main burden of the demand for mineral fuel on coal reserves." [2]

Still further estimates of the importance of water power were presented in the Energy Resources Report:

"At the beginning of 1938, at all water-power plants having a capacity of 100 horsepower or more, there were installed water wheels aggregating 17,284,379 horsepower. The Geological Survey considered at the beginning of 1936 that around one-fifth of our feasible potential water power had been developed. The aggregate capacity of prime movers was estimated in [fol. 5587] 1935 at about 1.2 billions of horsepower. These data indicate that water wheels for all water-power sites might have an aggregate capacity about 7 per cent as great as the aggregate capacity of prime movers in 1935. Such percentage, although used at times, leads to an understatement of the importance of water power. * * *

"The Bureau of Mines estimates that our total use of energy in 1937 was equivalent to 24,183 trillion B.t.u.; water power, included in terms of prevailing use of fuels in generating power at central electric stations, is estimated to have supplied 849 trillion, or 3.51 per cent of the total. In terms of the estimate of 1936 that water power was approximately one-fifth developed, we might conclude that water power used

[2] Ibid. Qualifications of this statement so far as it refers to oil and gas are noted subsequently in connection with the discussion of the oil and gas reserves.

at about the same efficiency as that of 1937 would in total produce annual energy equivalent to nearly 18 per cent of the total energy used in 1937, which probably was greater than that of previous years except 1926 and 1929.

"Production of electricity by hydroelectric generators in electric utility plants in 1937 amounted to 43.7 billion kilowatt-hours. Production of energy from water wheels outside the utility industry is not reported, but it is estimated as equivalent to 4.9 billion kilowatt-hours. The total energy output of water wheels, therefore, is estimated to have been equivalent to 48.6 billion kilowatt-hours. The Federal Power Commission estimates feasible undeveloped power great enough to produce somewhat over 273 billion kilowatt-hours a year. Presumably, existing water-power plants did not produce power as fully as their development and the available flow would permit. Therefore, the estimated total feasible energy output from water would exceed 322 billion. The estimated energy output of existing water-power plants was 48.6 billion, [fol. 5588] or 15.1 per cent of 322 billion. Thus, water-power plants, estimated to have produced 3.51 per cent of the total energy produced, are estimated to have produced something less than 15.1 per cent of the feasible total output from water power. From these items follows the estimate that total feasible output from water power would at least exceed 23.3 per cent of the total energy produced in the form of fuels and water power in this country in 1937."[1]

However, estimates of potential energy derivable from water power, like estimates of reserves of coal and petroleum, are subject to considerable qualification and correction. In the case of water power, the estimates are seriously affected by the great variation in stream flow and the extent to which such flow can be regulated and the efficiency of hydroelectric units in recovering the energy in falling water. Other variations will also be found, depending upon the basis of calculation which is used in estimating the total energy. It must be recognized, therefore, that estimates of

[1] Energy Resources and National Policy, op. cit., pp. 239-240.

feasible water power can be considered only as "useful approximations" while estimates of energy output from fuels and the fuel equivalents of water power must be taken as merely "the best comprehensive working approximation" so that an "exact evaluation of the importance of water power is impossible." The final conclusion in the Energy Resources Report, however, is that "it looks as if feasible annual output from water power might be considered equal to more than one-fifth, possibly equal to one-fourth, of our largest past annual output of energy."

As these comparisons are between a theoretical maximum for water power and past performance for other energies, it is apparent that this way of stating the proposition tends somewhat to overrate the significance of water power.[2] If, as we hope, our standard of living continues [fol. 5589] to increase and if population increases for some time to come even at a decreasing rate it seems apparent that the significance of *feasible water power* as a source of energy will be of declining importance in the energy total and *actual water power energy* quite likely even more so.[1] In its Summary of Conclusions the Energy Resources Committee wrote, "All our water power, including both that already developed and that feasible of development, could produce energy annually equivalent to only about one-fourth of the energy contained in all mineral fuels consumed in the country in 1937 for all purposes. Thus it can be seen that water power can suply only a fraction of our energy requirements. The mineral fuels must bear the main burden."[2]

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[2] The report under discussion recognizes this fact. "If our use of energy continues to expand greatly, water power, being limited, could supply only an eventually declining portion of the energy." Ibid., p. 240.

[1] Looking far ahead, the report continues, "the expectation that our population might become stationary, or actually decline, within a few decades, suggests that water power might come to hold its own or even to attain increased relative significance." Ibid., p. 240. However, it is scarcely necessary to point out that if this is so, it would hardly be at a level as high as suggested.

[2] Ibid., p. 32.

Reserves of Fuel Energy

For the nonreplenishable energy resources, coal, oil, and gas, estimates of the total reserves have frequently been made and the data are in such form that approximate geographical distributions of these reserves can be made by freight rate territories. In the case of the replenishable energy resource represented by power derived from falling water, there is, of course, no reserve in the same sense as in the case of the energy mineral resources. However, to date only a small proportion of the total available water power is actually being utilized for the production of energy. In a sense, therefore, this unused water power may be regarded as a huge reserve of potential energy as yet untapped. In this section estimates of reserves in the fore-[fol. 5590] going senses are presented as totals and distributed among the five freight rate territories.

Coal Reserves

In 1928 the United States Geological Survey estimated the total original tonnage of all coal at 3,214,898,600,000 net tons of 2,000 pounds, the total depletion (production and waste), at 25,517,232,000 tons, leaving the estimated reserves at the end of that year at 3,189,381,268,000 net tons.[1] By the end of 1934 it was estimated that a total of 3,182,000,000,000 net tons was still left underground.[2]

First made in 1912 and subsequently revised in some points, the estimates of original reserves were chiefly the work of Marius Campbell, among the most distinguished of American geologists. "* * * they incorporate the results of a lifetime of observation and field study of American coals. The estimates may be accepted as the best that could possibly be made from the data available at the time of compilation."[3] There are some indications, however,

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[1] Marius R. Campbell, Coal Resources of the United States, United States Geological Survey, 1928 (mimeographed).

[2] Rice, Fieldner, and Tryon, Conservation of Coal Resources, Third World Power Conference, Vol. 6, p. 673.

[3] Ibid.

that these figures were too high,[4] and between 1912 and [fol. 5591] 1928 Campbell was led to reduce his earlier estimates by 291 billion tons. Also the great bulk of the reserves are composed of low grade bituminous, sub-bituminous, and lignite coals, the heating value of which is substantially below the grade of the average coal produced today in the United States. In terms of heat equivalents equal to those of the average grade of coal now mined, Rice, Fieldner and Tryon estimates that the reserves would have to be reduced by 25 per cent.[1]

Although there has been only a relatively slight reduction to date in the quantity of the original reserves of coal, a geographical distribution of the tonnages by freight rate territories has been made for both the estimated original and present reserves. Table 27 shows the distribution of the Campbell estimates of original reserves and Table 28 the reserves as of January 1, 1937, as brought down to date in the report of the National Resources Committee on Energy Resources and National Policy.[2]

Because of the location of the fields, all of the Virginia reserves have been included in Southern territory although much of the area of that state lies in Official territory. Michigan reserves are apparently entirely in the southern peninsula and hence are included in Official territory. Colorado reserves are apparently located in both Western Trunk Line and Mountain-Pacific territories. As nearly as can be

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[4] Due to the unavailability from a practical standpoint of much of the nominal tons below ground, losses from mining, and later and more accurate data, these estimates are too high. On the last point Pennsylvania State geological survey estimated the original reserves of that state at a little over 68 billion metric tons against nearly 102 billion in the original Campbell estimates. (Ibid., p. 673.) On mine losses Rice, Fieldner and Tryon estimate that 35 per cent is the average and that 15 per cent is unavoidable. (Ibid., p. 674. See also slightly different estimates of Rice and Paul in the United States Coal Commission report in 1923 cited in Energy Resources and National Policy, 1939, op. cit., p. 286).

[1] Ibid., p. 674.

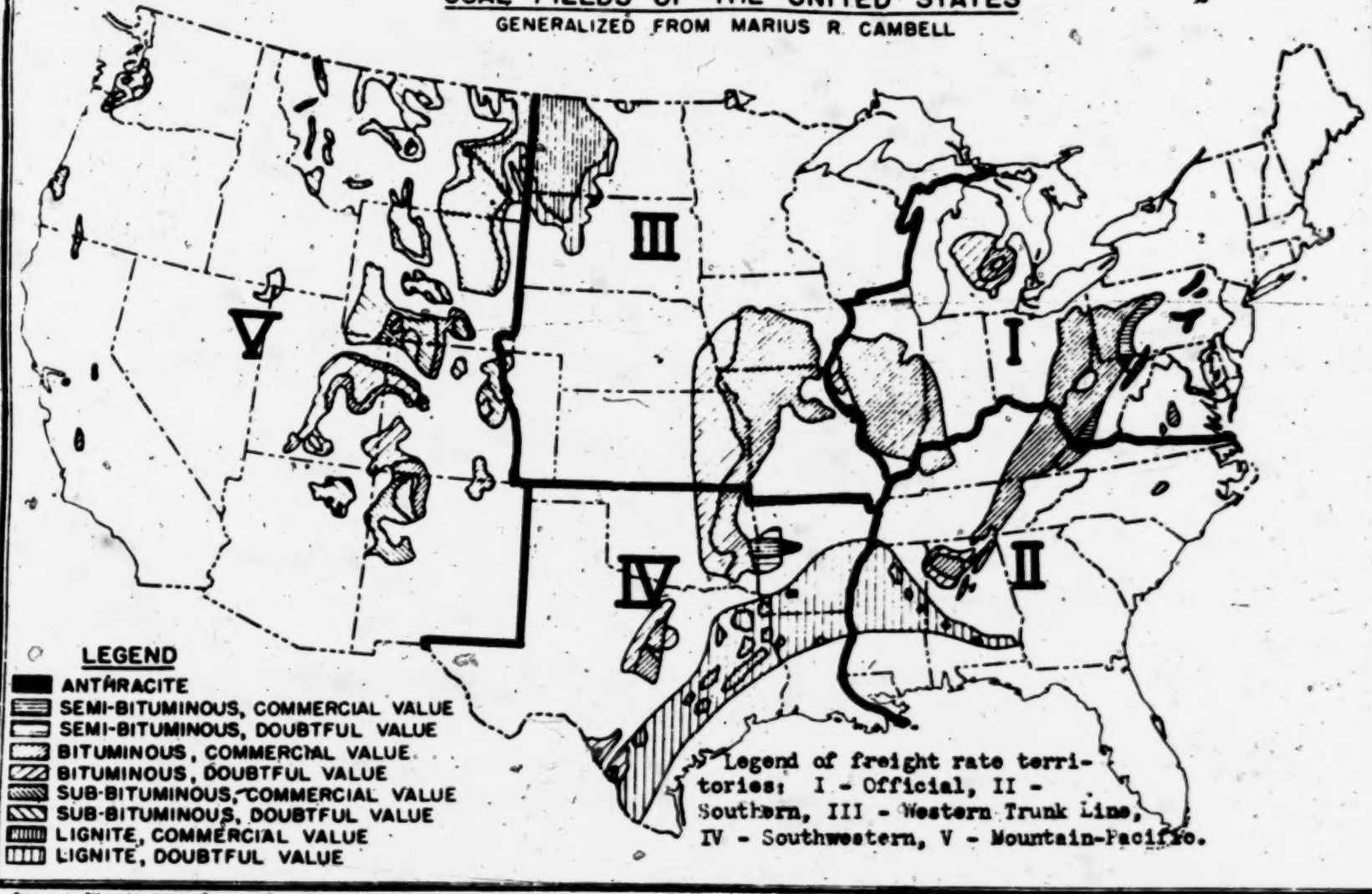
[2] Table 3, Coal Reserves, Energy Resources and National Policy, op. cit., p. 283 ff.

judged from the map of the coal fields by the U. S. Geological Survey (See Map 2) the bulk of the Colorado coal is in the Mountain-Pacific territory and the total production of that state, therefore, has been included in the Mountain-Pacific area. If the actual reserves lying in each freight rate territory could be readily separated, there would, of course, be a much more even distribution of the total reserves between the two territories. However, much of this Colorado coal lying along the boundary of these two freight rate territories is bituminous of doubtful value and the balance is commercial sub-bituminous.

Map 2

COAL FIELDS OF THE UNITED STATES

GENERALIZED FROM MARIUS R. CAMBELL



Prepared in Office of the National Resources Committee

Source: Leith and Liddell, p. 48.

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Table 27. - Distribution of Original Reserves of Coal, by Freight Rate Territories 1/

Territory	Bituminous and semi-bituminous	Sub-bituminous	Lignite	Anthracite
		Quantity (tons of 2,000 pounds)		
Official	623,153,000,000	-	-	21,000,000,000
Southern	238,712,000,000	-	-	500,000,000
Western Trunk Line	143,160,000,000	-	601,020,000,000	-
Southwestern	64,347,000,000	-	23,090,000,000	230,000,000
Mountain-Pacific .	365,508,000,000	818,581,000,000	315,474,500,000	123,100,000
United States	1,434,880,000,000	818,581,000,000	939,584,500,000	21,853,100,000
		Percentage distribution		
Official	43.43	-	-	96.10
Southern	16.64	-	-	2.29
Western Trunk Line	9.98	-	63.97	-
Southwestern	4.48	-	2.46	1.05
Mountain-Pacific .	25.47	100.00	33.57	.56
United States	100.00	100.00	100.00	100.00

1/ Compiled from Marius R. Campbell, Coal Resources of the United States, United States Geological Survey, Department of the Interior.

Table 28. - Distribution of Present Reserves of Coal, by Freight Rate Territories, January 1, 1937 1/

Territory	Bituminous and semi-bituminous	Sub-bituminous	Lignite	Anthracite
		Quantity (tons of 2,000 pounds)		
Official	602,389,369,000	-	-	14,589,460,000
Southern	235,092,383,000	-	-	488,976,000
Western Trunk Line	142,027,579,000	-	600,965,153,000	-
Southwestern	64,033,017,000	-	23,018,747,000	222,695,000
Mountain-Pacific .	364,265,943,000	818,083,894,000	315,473,543,000	114,471,000
United States	1,407,808,291,000	818,083,894,000	939,457,443,000	15,415,602,000
		Percentage distribution		
Official	42.79	-	-	94.64
Southern	16.70	-	-	3.17
Western Trunk Line	10.09	-	63.97	-
Southwestern	4.55	-	2.45	1.45
Mountain-Pacific .	25.87	100.00	33.58	.74
United States	100.00	100.00	100.00	100.00

1/ Compiled from Energy Resources and National Policy, Report of the Energy Resources Committee to the National Resources Committee, pp. 283-5. Figures brought down to date by T. A. Hendricks.

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[fol. 5595] The foregoing text tables show very clearly the heavy preponderance of the total reserves of bituminous and semibituminous coal in Official territory, this area possessing between 40 and 45 percent of the total for the United States or approximately as much as the Southern and Mountain-Pacific freight rate territories combined. Also Official territory possesses a practical monopoly of the anthracite reserves. Moreover, a glance at the accompanying map indicates that most of the Official territory bituminous area contains coal of commercial value whereas much of the bituminous area of the Mountain-Pacific division contains coal of doubtful commercial value. Practically all of the Southern bituminous area and most of that of Western Trunk Line territory, however, is of present commercial value.

As shown by Table 28 the present reserves of sub-bituminous and lignite are in excess of 1,700 billion tons as compared with a total of slightly over 1,400 billion for bituminous. The former reserves are highly concentrated in Mountain-Pacific and Western Trunk Lines territories. In terms of total tonnage of all coals, therefore, the Mountain-Pacific territory accounts for nearly one-half (47.09 per cent) of the country's present reserves and Western Trunk Line for nearly one-quarter (23.36 per cent) leaving Official territory with less than 20 per cent of the total and Southern territory with less than 8 per cent (Table 29). However, it is necessary to remember that the lower rank coals possess a lower heating value per pound than those of higher rank. As Map 2 indicates and as the Federal Power Commission points out,

> "In a very general way, these coals become poorer as one travels from east toward the west. In the area east of the Mississippi River, and particularly in the Appalachian field, the greatest production and the best quality of coals are found. It is in this area, also, that coal finds its greatest use as a power-producing agent."[1]

[fol. 5596] A ton of bituminous coal has more than twice the heating value of a ton of lignite, and bituminous (including semi- and sub-bituminous) and anthracite combined possess between them about four-fifths of the heating

[1] Interim Report, Power Series No. 1, National Power Survey of the Federal Power Commission, 1935, p. 41.

value of all coals.[1] Table 29, therefore, distributes the reserves of different types of coals by freight rate territories in terms of bituminous coal equivalents. Table 29 brings together for the five freight rate territories the total tonnages of all coals from Table 28 and the total tonnages of all coals in terms of bituminous heat equivalents. The effect of this conversion is to increase markedly the importance of Official and Southern territory at the expense of the Mountain-Pacific and especially Western Trunk Line territory, giving Official one-quarter of the total reserves in terms of bituminous coal equivalent and the Southern nearly 10 per cent. The enormous reserves of subbituminous and lignite in the Moutain-Pacific division, however, leave that territory in a dominant position with nearly 45 per cent of the reserves in terms of bituminous equivalents.

Petroleum Reserves

There have been numerous estimates of the petroleum resources of the United States, beginning with 1909 when the 2 billionth barrel of crude petroleum was brought to the surface.[2]

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[1] Energy Resources and National Policy, op. cit., p. 59. This reference compares the heating value of a *pound* of bituminous coal with a *ton* of lignite. It is assumed that the word "pound" should read "ton".

[2] Energy Resources and National Policy, op. cit., p. 288. According to D. T. Day, the author of the 1909 estimate, the total petroleum reserve of the United States might be as low as 10 billion or as high as 24.5 billion barrels. D. T. Day, The Petroleum Resources of the United States, U. S. Geological Survey, Bul. 394, 1909, p. 35.

(Here follows 1 photolithograph, side folio 5597)

Table 29. - Comparison of the Total Coal Reserves (Bituminous, Semi-bituminous, Sub-bituminous, Lignite, and Anthracite) Expressed in Terms of Total Tonnages of All Coals and in Terms of Bituminous Coal, by Freight Rate Territories, January 1, 1937

(Thousands of net tons)

Territory	Total tonnage of all coals		Total tonnage of all coals in terms of bituminous coal equivalent	
	Tons 1/	Percent of total	Tons 2/	Percent of total
Official	616,978,329	19.40	615,913,818	25.15
Southern	235,581,359	7.41	235,545,664	9.62
Western Trunk Line	742,992,732	23.36	435,959,638	17.80
Southwestern	87,274,459	2.74	75,497,924	3.08
Mountain-Pacific .	1,497,937,851	47.09	1,085,929,533	44.35
United States	3,180,765,230	100.00	2,448,846,577	100.00

1/ From Energy Resources and National Policy, Report of the Energy Resources Committee, 1939, pp. 283-5. Original tonnage estimates are those of M. R. Campbell: Coal Resources of the United States, U. S. Geological Survey, 1928. The production and amounts lost in mining and marketing were brought down to date as of Jan. 1, 1937, in the Energy Resources report.

2/ Recompiled from Table 2, p. 58, of Energy Resources and National Policy, op. cit. Conversion ratio used in the National Resources table, 13,700 b.t.u. for bituminous, 12,700 for anthracite, 9,500 for sub-bituminous, and 6,700 for lignite. Ibid., p. 59.

Most of the earlier estimates apparently included unproved reserves in unknown fields as well as proved re- [fol. 5598] serves. The former could not obviously be estimated with any substantial degree of accuracy. In the case of proved reserves, however, the quantity could be approximated with much greater exactitude based upon past production of depleted fields.[1] The first estimate of proved reserves was made by a joint committee of the American Association of Petroleum Geologists and the Geological Survey in the year 1921.[2] From this date to the middle of 1939 there have appeared a total of some 36 estimates of proved reserves or an average of about two estimates per annum. From the first figures of 5 billion barrels, published in 1922, and which included both proved and unproved reserves, the estimates have gradually risen to nearly 3½ times that figure in 1939.[3]

In considering the estimates of the petroleum reserves of the country, however, and more particularly as distributed among the different freight rate territories, it is necessary to recognize fully the somewhat speculative character[4] of

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[1] Energy Resources and National Policy, op. cit., p. 289.

[2] The Oil Supply of the United States, bul. of the American Association of Petroleum Geologists, 1922, Vol. VI, No. 1, pp. 42-46.

[3] Seven estimates were published in the first four months of 1939. The lowest was about 14 billion barrels and the highest 17,751,000,000 barrels. Outstanding Features of Oil-Field Development and Petroleum Geology in the United States, 1934-1938, by the Geological Survey, Petroleum Investigation, Hearing before a Subcommittee of the Committee on Interstate and Foreign Commerce, 76th Congress, on H. Res. 290 and H. R. 7372, pp. 102-103.

[4] "In 1860, one year after the Drake well was brought in at a 69-foot level, an oil shortage was predicted as the prevailing rate of oil consumption would exhaust the supply in a few years. This prediction has been reiterated at about five-year intervals ever since. In 1860 the U. S. A. crude oil production was 500,000 barrels and 1,250,000,000 barrels in 1939. * * * During last year alone, approximately 2,000,000,000 barrels of crude were added to our oil reserves above that actually used. Through the years crude oil reserves have been increasing by finding new oil fields, by

[fol. 5599] these reserves as well as the effect of this fact on the reserve estimates of particular areas.

Many of the more recent estimates have been made by states and the elements of speculation involved may naturally affect the state and the freight rate territory totals more significantly than the totals for the country where overestimates in one state or territory may be more or less counterbalanced by underestimates in another. The Report of the Resources Committee on Energy Resources and National Policy contains a comparison in total and by states of three 1938 estimates of petroleum reserves made, respectively, by the American Petroleum Institute, the Oil and Gas Journal, and Alex W. McCoy. The highest of these three, 15,506 million barrels, is only a trifle more than 20 percent above the minimum of 12,909 million. Of the 18 states for which figures are given, however, the highest estimate exceeded the lowest by more than 40 percent in all but one-third of them, and in five of these 18 states the maximum of the three estimates exceeded the minimum by more than 100 percent.[1] By rate territories the variation in the 1938 estimates is, as would be expected, considerably greater in some cases than for the country as a whole though very much lower in all cases than the higher ranges of variation appearing in the state figures cited above.

Table 30 presents estimates of petroleum reserves for selected years as compiled by freight rate territories from

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deeper drilling in old fields, and by hydrochloric acid treatment, called acidizing, of old and new oil sands." Gustav Egloff, Progress in Petroleum, address at the 18th Annual Meeting of the American Institute of Chemists in Acceptance of the Medal Award in 1940.

[1] Table 3, Energy Resources and National Policy, op. cit., p. 131.

(Here follows 1 photolithograph, side folio 5600)

Table 30. - Selected Estimates of Proven Reserves of Petroleum, 1925-1939 1/

(Thousands of barrels of 42 gallons)

Territory	1925 2/	1934 3/	1935 4/	1937 5/	1938 6/	1939 7/
Official	393,500	415,000	601,000	531,241	432,471	583,403
Southern	78,974	30,000	50,000	38,846	38,366	37,545
Western Trunk Line	314,501	194,000	390,000	590,000	607,017	613,230
Southwestern	2,027,153	6,894,000	8,494,000	10,470,915	12,222,422	11,838,536
Mountain-Pacific	2,507,299	5,825,500	4,097,000	4,225,188	4,450,563	4,275,332
Total	5,321,427	8/ 13,356,500	13,632,000	15,856,190	17,750,839	17,348,146
	Percent of U.S. totals					
Official	7.4	3.1	4.4	3.4	2.4	3.4
Southern	1.5	.2	.4	.2	.2	.2
Western Trunk Line	5.9	1.5	2.9	3.7	3.4	3.5
Southwestern	38.1	51.6	62.3	66.0	68.9	68.2
Mountain-Pacific	47.1	43.6	30.0	26.7	25.1	24.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

1/ 1925 figures are taken from "Energy Resources and National Policy," Table 5, page 294, and the balance from Table 5, Petroleum Investigation, Hearing before a Subcommittee of the Committee on Interstate and Foreign Commerce on H. Res. 290 and H.R. 7372, Part I, 76th Congress, p. 102.

2/ Committee of Eleven, American Petroleum Institute, American Petroleum Supply and Demand, 1925, pp. 58-59.

3/ 1934 (Jan. 1): H.B. Soyster in U.S. Geol. Survey, Geology and Occurrence of Petroleum in United States: Petroleum investigation, House of Representatives, 73d Cong.; hearings on H. Res. 441, pt. 2, pp. 1071-1081, 1934.

4/ 1935 (Jan. 1): Revised estimate American Petroleum Institute Committee on Petroleum Reserves, American Petroleum Institute Quarterly, vol. 7, No. 2, p. 5, April 1937.

5/ 1937 (Jan. 1): Revised estimate American Petroleum Institute Committee on Petroleum Reserves, American Petroleum Institute Quarterly, vol. 8, No. 2, pp. 12-13, April 1938.

6/ 1938 (Jan. 1): Revised estimate American Petroleum Institute Committee on Petroleum Reserves, American Petroleum Institute Quarterly, vol. 9, No. 2, pp. 7-8, April 1939.

7/ 1939 (Jan. 1): Subject to revision. American Petroleum Institute Committee on Petroleum Reserves, American Petroleum Institute Quarterly, vol. 9, No. 2, pp. 7-8, April 1939.

8/ Does not include 1,500,000 bbls. for which the states of origin are not specified.

5600

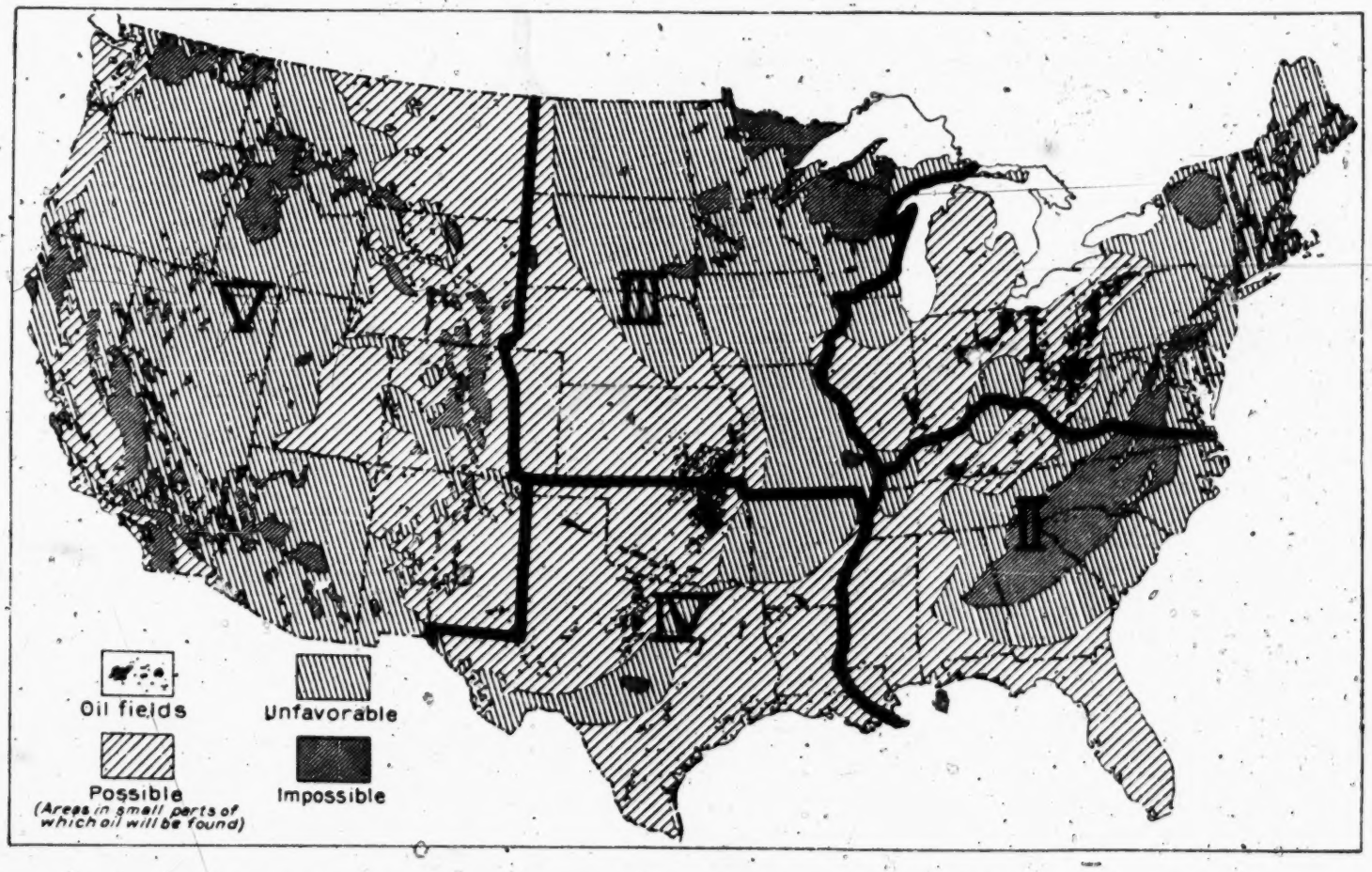
[fol. 5601] the state figures reported in various sources. Outside the Southwestern and the Mountain-Pacific divisions the reserves are relatively insignificant.

The Southwestern freight rate territory with approximately 68 per cent of the total according to the 1939 preliminary estimate, is, of course, outstanding in its possession of proven petroleum reserves and this territory together with the Mountain-Pacific division had 92.9 per cent of the total reserves in 1939. Although the reserves of the Official freight rate territory are relatively insignificant in comparison with those of either the Mountain-Pacific or the Southwestern areas, they are many times those of Southern territory and less than 0.1 per cent below those of the Western Trunk Line area.

Examination of the map of reserves (Map B) prepared by the U. S. Geological Survey and taken from the report on Energy Resources and National Policy [1] sheds some further light on the question of reserves of the different rate territories in terms of possible future potentialities. A considerable portion of the areas lying within Official territory (most of the States of Illinois, Indiana and Ohio and parts of Pennsylvania and West Virginia) are classed by the Geological Survey as "possible" productive territory, i.e., areas in small parts of which commercial quantities of oil may be found in the future. The same is true of a large portion of the states in Southern territory, all of Mississippi and Florida and nearly all of Kentucky and parts of Tennessee and Alabama. Western Trunk Line territory includes also a narrow "possible" strip in western North Dakota widening southward through South Dakota and Nebraska and including all the State of Kansas. This belt of "possible" productive territory extends westward into the Mountain-Pacific territory, including most of Montana, Wyoming, Colorado and a sizeable part of Utah. Almost all of the Southwestern territory is considered as "possibly" productive on a commercial basis. The balance of the United States is unfavorable for oil production except for a narow strip along the Pacific coast,

Map B

Oil Fields and Unproductive Areas of the United States



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: National Resources Committee, "Energy Resources and National Policy," January 1939, p. 293.

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[fol. 5603] the bulk of which is classified as possible for production. The largest single area classified as impossible runs south from Virginia through the Carolinas and Georgia into Alabama.

None of the foregoing calculations of Petroleum Reserves include any allowances for oil production from oil shales or from coal. Many years ago it was estimated that the total recoverable oil from the oil shales of the United States was 92,144,985,000 barrels or ten times the amount of well oil produced in the United States up to the close of 1924. More than 75 billion barrels of this total was estimated to be in the Mountain-Pacific territory. Not quite 7 billion of the remainder was located in Official territory and not quite 10 billion in Southern territory.[1]

The distribution of the coal reserves of the United States by freight rate territories has been presented in the preceding discussion. This coal will yield an oil somewhat similar to petroleum which assures an adequate reserve for centuries to come, assuming, of course, that price and demand would justify extraction. For bituminous, sub- and semi-bituminous the total has been estimated at 525 billion barrels of heavy liquid fuel or 92 billion barrels of motor fuel. The lignite deposits are estimated to yield in addition 70 billion barrels of liquid fuel or 12 billion barrels of motor fuel.[2] No distribution of these figures by freight rate territories has been undertaken for either the oil shales or for coal on account of the remoteness of the probable utilization of these resources for petroleum production.

Natural Gas Reserves

One-half, roughly, of the gas reserves of the United States show practically the same geographical distribution as the oil reserves. This is because approximately one-half [fol. 5604] of the natural gas is produced with oil, the gas being the source of energy which brings the oil to the sur-

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[1] Dean E. Winchester, The Oil Possibilities of the Oil Shales of the United States, Appendix 1, Report II of the Federal Oil Conservation Board to the President, 1928, pp. 13-14.

[2] Bureau of Mines, Appendix III, ibid., p. 21.

face. For a considerable period of years now, 1,500 to 2,000 cubic feet of natural gas per barrel of oil has been marketed and the tendency is that this ratio will increase in the future. As the known oil reserves are of the order of 15 billion barrels, we are thus presumably assured of a minimum reserve of between 22.5 and 30 trillion cubic feet of natural gas.

But gas is also found in many areas which do not produce oil and larger volumes of gas are also being found with oil discovered and produced from progressively greater depths. As in the case of oil, several estimates of the natural gas reserves have been made and these estimates, like those of oil reserves, have been gradually increasing in size. In 1930 Huntley and Mason estimated the gas reserves produced with oil east of the Rockies to be 49.5 trillion cubic feet as a minimum. Although they did not estimate the Pacific Coast reserves, they suggested that the minimum oil reserves for that area would be of the order of 8 billion barrels. Assuming 1,500 cubic fet of gas produced per barrel of oil, their oil estimate would add a total of 12 trillion cubic feet to their figures for reserves west of the Rockies, thus raising the total to above 60 trillion cubic feet. But H. O. Castor, president of the American Gas Association, and V. R. Garfias in 1931 and 1934, respectively, placed the proved reserves much below this figure estimating only 30 trillion and 40 trillion cubic feet, respectively. In 1935, H. A. Ley estimated future recoverable gas from commercially proved and important areas as not less than 75 trillion cubic feet, although pointing out that most of this reserve has been discovered and proved in connection with the search for oil and that some part of it would be wasted in the production of oil. In the same year R. E. Davis in a paper before the American Gas Association estimated the known natural gas reserves at 62 trillion cubic feet. Hoots and Herold took exception to the Davis estimates, especially with regard to the California reserves which they placed at 34 trillion cubic feet as against the Davis figure of 5.9 trillion. If their figures be substituted in the Davis estimate, the total of the reserves would exceed 90 trillion cubic feet. Richards, after setting out the foregoing estimates in the [fol. 5605] Energy Resources report, concludes:

"The discovery of important gas reservoirs since the date of the above estimates, notably by deeper drilling

in California, the Rocky Mountain area, and in the North Central States, warrants the opinion that the known natural-gas reserves of the nation are at least of the order of a hundred trillion cubic feet, or in excess of 30 years' supply in terms of the present high rate of utilization."[1]

At the request of a representative of the Commission, Dr. Richards has kindly furnished his approximate distribution of these natural gas reserves by freight rate territories as follows:

Freight rate territory	Trillion cu. ft.
Official	6
Southern	3
Western Trunk Line	11
Southwestern	41
Mountain-Pacific	39
Total	100

Total Energy of Mineral Fuel Resources

Table 30A compiled from the data in Tables 29 and 30 and the estimates of natural gas reserves by Dr. Ralph Richards of the Bureau of Mines in the preceding subsection shows the distribution of the mineral fuel energies in terms of heat units. Because of the enormous significance of coal in the total reserves of mineral fuel energies, the showing of this table differs but little from that for all coals in terms of bituminous shown in Table 29. In both cases the Mountain-Pacific territory leads with over 44 percent

[1] Ralph W. Richards (U. S. Geological Survey, Dept. of Interior), "Natural Gas Reserves," Pt. II, Section 1, Chap. 3, Energy Resources and National Policy, op. cit., pp. 294-297. This should be consulted for further details regarding publications in which the foregoing estimates appeared and other details.

50024

Table 30A. - Distribution of Total Energy of Mineral Fuel Resources by Freight Rate Territories, January 1, 1937 (Approx.) 1/

(In trillions of b.t.u.)

Territory	All coal	Petroleum 2/	Natural gas	All minerals	
				Total	Percent of U.S.
Official	16,136,942	3,187	6,450	16,146,579	25.1
Southern	6,171,296	233	3,225	6,174,754	9.6
Western Trunk Line	11,422,143	3,540	11,825	11,437,508	17.8
Southwestern	1,978,046	62,825	44,075	2,084,946	3.2
Mountain-Pacific	28,451,354	25,351	41,925	28,518,630	44.3
United States	64,159,781	95,136	107,500	64,362,417	100.0

1/ From Tables 29 and 30 and page 125. Conversion ratios used are those shown in Minerals Yearbook for 1938, p. 703, as follows: bituminous coal, 13,100 b.t.u. per pound; petroleum, 6,000,000 b.t.u. per bbl.; natural gas, 1,075 b.t.u. per cu. ft.

2/ Excluding oil from oil shales.

[fol. 5607] of the total, followed by Official territory with over 25 percent. Also in both tables Western Trunk Line, Southern, and Southwestern show over 17, 9, and 3 percent, respectively, of the total for the United States.

Water Power Resources

In 1937 the total capacity of installed water wheels in plants having 100 horsepower or more in the United States was estimated by the U. S. Geological Survey at 17,120,000 horsepower. In the same year the production of electric energy in the United States was slightly in excess of 121 billion kilowatt-hours, of which nearly 44 billion or a little over 36 percent was produced by hydroelectric and the balance by plants utilizing fuel energy. As against the figure of 17,120,000 horsepower capacity of installed water wheels, however, the potential water power of the United States was estimated at a total of 42,753,000 horsepower available 90 percent of the time and 57,184,000 horsepower available 50 percent of the time. Potential water power, as measured by horsepower available 90 percent of the time, therefore, was equivalent to roughly 2½ times the actually installed horsepower capacity and when measured by horsepower available 50 percent of the time, was equivalent to nearly 3.4 times the total installed horsepower capacity.

In Tables 31 and 32 these figures have been distributed by freight rate territories, the differences in the tables and totals for the same territories representing differences in the groupings of the states used in the composition of the rate territory figures.

In both groupings Mountain-Pacific and Official rate territories are outstanding in the production of hydroelectric energy and also in the horse-power of installed water wheels. Together they account for over 70 percent of the hydroelectric energy and around two-thirds of the capacity of installed water wheels regardless of which grouping is considered. In 1937 hydroelectric energy produced in Mountain-Pacific territory exceeded Official territory by several points percent but in capacity of installed water

5608

Table 31. - Waterpower Resources and Energy Production, by Freight Rate Territories

Territory	Grouping A: Potential water power, 1936 1/ — Available 90% of the time	Grouping A: Potential water power, 1936 1/ — Available 50% of the time	Grouping A: Capacity of installed water wheels 1937 2/	Production of electric energy, 1937 3/ — Hydro	Production of electric energy, 1937 3/ — Fuel	Production of electric energy, 1937 3/ — Total
	(Horsepower, thousands)			(Thousands of kilowatt-hours)		
Official 4/	7,586	10,741	5,966	15,283,709	56,757,208	72,040,917
Southern 5/	4,328	6,094	3,888	8,261,194	3,376,746	11,637,940
Western Trunk Line 6/.	1,466	2,391	1,356	2,843,981	7,602,062	10,446,043
Southwestern 7/	764	967	149	261,215	6,126,569	6,387,781
Mountain-Pacific 8/ ..	28,509	36,991	5,761	17,051,901	3,485,045	20,536,946
Total	42,753	57,184	17,120	43,702,000	77,347,630	121,049,630
	Percent of U.S. totals					
Official 4/	17.98	18.78	34.85	34.97	73.38	59.52
Southern 5/	10.12	10.66	22.71	18.90	4.37	9.61
Western Trunk Line 6/.	3.43	4.18	7.92	6.51	9.83	8.63
Southwestern 7/	1.79	1.69	.87	.60	7.92	5.28
Mountain-Pacific 8/ ..	66.68	64.69	33.65	39.02	4.50	15.96
Total	100.00	100.00	100.00	100.00	100.00	100.00

1/ Potential Water Power in the United States, U.S. Department of the Interior (mimeographed), Aug. 20, 1936
2/ U.S. Department of the Interior, Geological Survey. For plants having 100 horsepower or more.
3/ Federal Power Commission, Electric Power Statistics, 1937. Production for strictly private use not included, but electric railways, electrified sections of steam railways, and miscellaneous Federal and other plants serving Government or public are included.
4/ Including Michigan and Virginia and excluding Wisconsin. The exclusion of the highly industrialized eastern portion of Wisconsin from Official territory somewhat underestimates the importance of this territory.
5/ Excluding Virginia and Louisiana.
6/ Including Wisconsin and excluding Colorado.
7/ Including Louisiana.
8/ Including Colorado.

Table 32. - Waterpower Resources and Energy Production, by Freight Rate Territories

Grouping B

Territory	Potential water power, 1936 1/		Capacity of installed water wheels 1937 2/	Production of electric energy, 1937 3/		
	Available 90% of the time	Available 50% of the time		Hydro	Fuel	Total
	(Horsepower, thousands)			(Thousands of kilowatt-hours)		
Official 4/	7,223	10,092	5,809	14,850,195	55,445,543	70,295,738
Southern 5/	4,861	6,817	4,045	8,694,708	6,356,802	15,051,510
Western Trunk Line 6/	2,113	3,242	1,459	3,063,713	8,103,812	11,167,525
Southwestern 7/	694	893	149	261,215	4,458,178	4,719,393
Mountain-Pacific 8/ ..	27,862	36,140	5,658	16,832,169	2,983,295	19,815,464
Total	42,753	57,184	17,120	43,702,000	77,347,630	121,049,630
	Percent of U.S. totals					
Official 4/	16.90	17.65	33.93	33.98	71.68	58.07
Southern 5/	11.37	11.92	23.63	19.89	8.22	12.43
Western Trunk Line 6/	4.94	5.67	8.52	7.01	10.48	9.23
Southwestern 7/	1.62	1.56	.87	.60	5.76	3.90
Mountain-Pacific 8/ .	65.17	63.20	33.05	38.52	3.86	16.37
Total	100.00	100.00	100.00	100.00	100.00	100.00

1/ Potential Water Power in the United States, U.S. Dept. of the Interior (mimeographed), Aug. 20, 1936.
2/ U.S. Department of the Interior, Geological Survey. For plants having 100 horsepower or more. Figures obtained from Energy Resources and National Policy, op. cit., p. 241.
3/ Federal Power Commission. Electric Power Statistics, 1937. Production for strictly private use not included, but electric railways, electrified sections of steam railways, and miscellaneous Federal and other plants serving Government or public are included. Energy Resources and National Policy, p. 242.
4/ Including Michigan. The exclusion of the highly industrialized eastern portion of Wisconsin from Official territory somewhat underestimates the importance of this territory.
5/ Including Virginia and Louisiana.
6/ Including Wisconsin and Colorado and excluding Michigan. The upper peninsula of Michigan, which belongs in Western Trunk Line territory, is relatively unimportant compared with the state as a whole.
7/ Excluding Louisiana.
8/ Excluding Colorado.

5609

[fol. 5610] wheels neither territory showed a significant lead over the other, Official territory leading slightly in the A grouping and Mountain-Pacific in the B. In very rough terms, therefore, each of these two rate territories showed about as much installed capacity and generated about as much hydroelectric power as all of the remaining thre freight rate territories combined. The Southern rate territory is a rather poor third in hydroelectric production but makes a somewhat better showing in the capacity of installed water wheels as compared with either Mountain-Pacific or the Official rate areas.

As already pointed out, reserves in the sense of irreplaceable mineral resources cannot be said to exist in the case of a replenishable natural resource such as water power. In so far, however, as such replenishable resources have not been fully developed or utilized, they may be said to constitute a reserve of natural resources in the sense that until fully utilized the quantity of replenishable energy may be steadily expanded.

From the standpoint of water power reserves, therefore, or perhaps more accurately potential water power energy, a freight rate territorial distribution tells a somewhat different story than does the capacity of installed water wheels or the production of hydroelectric energy. One of such distribution of estimated potential energy is shown in the first two columns of the two preceding tables. Whether water power available 90 percent of the time or available 50 percent of the time is used, the Mountain-Pacific division accounts for close to two-thirds of the total. Official territory, however, has between 16 and 19 percent of the total as against between 10 and 12 percent for Southern territory. Neither Western Trunk Line nor Southwestern territory is of significant importance as a source of potential energy although the former area is much better off in this respect than is the latter.

According to the Federal Power Commission, the total feasible addition to the annual output of energy in terms of kilowatt-hours was 273,377 millions as compared with 48,580 million estimated as the actual annual output of water power plants at the end of 1937. The total of the two [fol. 5611] would be 321,957 millions of kilowatt-hours according to the Energy Resources report. In other words, about 15 percent of the estimated feasible annual output was in use at the end of the year 1937.

Tables 33 and 34 present the distribution of these estimates according to the same two groupings of freight rate territories as were shown in the preceding tables.

The resulting pictures merely emphasize the previous showing of the outstanding importance of the Mountain-Pacific area from the standpoint of potential energy production. With a 1937 estimated annual output only a little over one-third of the kilowatt-hours for the entire country, it accounts for nearly three-quarters of the estimated feasible additions and for in excess of two-thirds of the estimated feasible annual power output in terms of kilowatt-hours. In considering the significance of these figures it is necessary to recognize that their importance is affected by certain technological limitations on the transmission of power. Comparatively little water power is used directly at the power site. Technical limits of transmission while not well defined are sufficiently narrow to render much of the electric power generated in one freight rate territory unavailable to other freight rate areas [1] at least for the present.

Utilization of the vast reserves of the Mountain-Pacific area, therefore, must presumably depend either on further developments in low cost transmission of electric power or further industrial development of the Mountain-Pacific freight rate territory.

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[1] According to Dr. Karl T. Compton, speaking in 1937, about 250 miles from the generating station, and according to J. D. Ross, late administrator of Bonneville, speaking in 1938, about 300 miles for very large blocks of power. In Energy Resources and National Policy, op. cit., p. 245, from 5 Edison Electric Institute Bull., Vol. 5, No. 1 (Jan. 1937) and Scientific American, Dec. 1938, p. 305.

(Here follow 2 photolithographs, side folios 5612-6513)

Table 33 - Estimated Actual and Feasible Energy Output of Water Power Plants Existing at End of 1937 1/

Grouping A

Territory	Estimated annual output of water power plants, end of 1937 2/	Estimated feasible addition to annual output 3/	Estimated minimum 4/ feasible annual output
	Millions of kilowatt-hours		
Official 5/	18,288	34,549	52,837
Southern 6/	9,389	28,227	37,616
Western Trunk Line 7/ ...	3,284	3,666	6,950
Southwestern 8/	263	5,927	6,190
Mountain-Pacific 9/	17,356	201,008	218,364
Total	48,580	273,377	321,957
	Percent of U.S. totals		
Official 5/	37.64	12.64	16.41
Southern 6/	19.33	10.32	11.68
Western Trunk Line 7/ ...	6.76	1.34	2.16
Southwestern 8/	.54	2.17	1.92
Mountain-Pacific 9/	35.73	73.53	67.83
Total	100.00	100.00	100.00

1/ Rearrangement of Table 6, Energy Resources and National Policy, op. cit., pp. 244-245.

2/ To hydro output shown in Table 3 (Energy Resources and National Policy), estimates have been added for output of water wheels not covered by the reports of the Federal Power Commission on production of electrical energy. Capacity of such water wheels reported by the Power Commission. Electrical output (or equivalent, for mechanical drive) estimated on the basis of an assumed 35 percent capacity-use factor.

3/ Estimates by Federal Power Commission, Pt. two, sec. II, chap. 1, of Energy Resources and National Policy report.

4/ Regarded by Watson as a minimum because existing installations were operated at neither plant nor site capacity.

5/ Including Michigan and Virginia and excluding Wisconsin.

6/ Excluding Virginia and Louisiana.

7/ Including Wisconsin and excluding Michigan and Colorado.

8/ Including Louisiana.

9/ Including Colorado.

Table 34. - Estimated Actual and Feasible Energy Output of Water Power Plants Existing at End of 1937 1/

Grouping B

Territory	Estimated annual output water power plants, end of 1937 2/	Estimated feasible addition to annual output 3/	Estimated minimum 4/ feasible annual output
	Millions of kilowatt-hours		
Official 5/	16,583	29,052	45,635
Southern 6/	9,832	33,773	43,655
Western Trunk Line 7/	4,731	6,982	11,713
Southwestern 8/	263	4,863	5,126
Mountain-Pacific 9/	17,121	196,707	215,828
Total	48,530	273,377	321,957
	Percent of U.S. totals		
Official 5/	34.14	10.63	14.17
Southern 6/	20.34	12.35	13.56
Western Trunk Line 7/	9.74	2.55	3.64
Southwestern 8/	.54	1.78	1.59
Mountain-Pacific 9/	35.24	72.69	67.04
Total	100.00	100.00	100.00

1/ Rearrangement of Table 6, Energy Resources and National Policy, op. cit., pp. 244-245.

2/ To hydro output shown in Table 3 (Energy Resources and National Policy), estimates have been added for output of water wheels not covered by the reports of the Federal Power Commission on production of electrical energy. Capacity of such water wheels reported by the Power Commission. Electrical output (or equivalent, for mechanical drive) estimated on the basis of an assumed 35 percent capacity-use factor.

3/ Estimates by Federal Power Commission, Pt. two, sec. II, chap. 1, of Energy Resources and National Policy report.

4/ Regarded by Watson as a minimum because existing installations were operated at neither plant nor site capacity.

5/ Excluding Michigan, Wisconsin, and Virginia.

6/ Including Virginia and Louisiana.

7/ Including Michigan, Wisconsin, and Colorado.

8/ Excluding Louisiana.

9/ Excluding Colorado.

[fol. 5614] CHAPTER IV

Rate Territory Distribution of Agricultural Resources

Importance of Agricultural Resources

The significance of our agricultural resources lies not alone in the fact that agricultural products provide the foodstuffs for our huge population, but also in the fundamental importance of such products as a source of raw material for the manufacture of a great variety of commodities other than foodstuffs.

A good many years ago Malcolm Kier stated that "Farms furnish more than three-fourths of all materials upon which factories worked."[1] Although some attempts have been made to verify this figure, no confirmation of it has been found up to the date of this writing.[2]

In the early 1930's, however, the late Tracy E. Thompson, an industrial analyst of the Bureau of the Census, made a study of "Materials Used in Manufactures" based upon the census of manufactures of 1929. This study showed the estimated cost to manufacturers of the raw materials produced by each of five extractive industries. Of the total cost estimated at 12.676 billion dollars, including both domestic and foreign products, 8.451 billion was supplied by agriculture and animal husbandry, or 67.4 percent of the total. Excluding foreign raw materials, 6.763 billion out of a total of 10.472 billion was paid for the products of agriculture and animal husbandry or about 64.5 percent of the total. The cost of manufacturing raw materials derived from each of the five extractive industries as estimated in the Thompson study is shown in Table 35.

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[1] Malcolm Kier, "Manufacturing," 1928, p. 3.

[2] Professor Kier was unable, upon inquiry, to furnish the source of his information other than that he was sure that he obtained the statement from the introduction to the Census of Agriculture "which census, 1930, 1920, 1910, I cannot recall because the notes for that book have been burned." Examination of the publications in question did not disclose any such figures nor has inquiry through various channels at the Department of Agriculture turned up any clues as to the source of such a figure.

[fol. 5616] The highly industrialized character of Official classification territory has apparently tended to obscure the fact that it is at the same time an equally or more important agricultural area, depending on the criteria employed, than any of the other freight rate territories. For example, Table 36 shows that in 1939, the latest year for which the figures are available, the gross farm income of the United States aggregated 8.96 billion dollars, of which Official territory produced 2.76 billion, or approximately 31 per cent. Western Trunk Line territory was a close second in importance, accounting for 2.38 billion, or approximately 27 per cent of the total, and was followed by the Southern, Mountain-Pacific, and Southwestern rate areas in the order named. No one of these last three areas, however, produced as much as 17 per cent of the United States total in the year in question. As used in this table, gross income consists of the cash income from sales plus the value of home consumption after eleminating the value of crops fed to livestock. The figures do not include $807,065,000 of income representing government payments.[1]

Not only did Official classification territory lead in the proportion of gross farm income produced in the five rate territories, but it also led, though by a narrow margin, in the gross farm income from crops and from livestock and livestock products.

In crop income, however, the Southern rate territory was a close competitor of Official territory with only a little over 12 million less income, and in livestock and livestock products Official territory led the Western Trunk Line area by less than 52 million dollars. It is important, however, that Official territory's showing for total farm income is not due to excess weighting by either the crop or livestock figures but that the area actually led in both respects. Both Mountain-Pacific and Southwestern territories show a remarkably equal division of their agriculture between crops and livestock products. In contrast, both Western Trunk Line and Official territories show a little less than two-

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[1] U. S. D. A., B. A. E., "Gross Farm Income and Government Payments, 1936-1939," July 8, 1940, p. 7 (mimeographed).

Table 35. Estimated Cost of Manufacturers of Raw Materials Consumed, Distributed According to the Extractive Industries Where Produced: 1929

Industry	Total		Domestic		Foreign	
	Amount	Percent of total	Amount	Percent of total	Amount	Percent of total
Five extractive industries, total	$12,676,000,000	100.0	$10,472,000,000	100.0	$2,204,000,000	100.0
Agriculture and animal husbandry	8,541,000,000	67.4	6,763,000,000	64.6	1,778,000,000	80.7
Mining and quarrying ..	3,494,000,000	27.6	3,279,000,000	31.3	215,000,000	9.8
Logging, etc.	477,000,000	3.8	390,000,000	3.7	87,000,000	3.9
Fishing	39,000,000	0.3	19,000,000	0.2	20,000,000	.9
Hunting and trapping ..	125,000,000	1.0	21,000,000	.2	104,000,000	4.7

Source: U. S. Department of Commerce, Bureau of the Census, Materials Used in Manufactures: 1929, 1933, p.4.

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Table 36. - Gross Farm Income from Crops and Livestock, by Freight Rate Territories, 1939 1/

Territory	Crops 2/	Livestock and livestock products 3/	Total
		(1,000 dollars)	
Official	945,954	1,814,350	2,760,304
Southern	933,632	574,475	1,508,107
Western Trunk Line	615,896	1,762,524	2,378,420
Southwestern	510,388	513,965	1,024,353
Mountain-Pacific	656,395	634,306	1,290,701
United States	3,662,265	5,299,620	8,961,885
	Percent of territory totals		
Official	34.27	65.73	100.00
Southern	61.91	38.09	100.00
Western Trunk Line	25.90	74.10	100.00
Southwestern	49.83	50.17	100.00
Mountain-Pacific	50.86	49.14	100.00
United States	40.86	59.14	100.00
	Percent of U. S totals		
Official	25.83	34.23	30.80
Southern	25.49	10.84	16.83
Western Trunk Line	16.82	33.26	26.54
Southwestern	13.94	9.70	11.43
Mountain-Pacific	17.92	11.97	14.40
	100.00	100.00	100.00

1/ Preliminary.

2/ Data for states divided by freight rate territory boundaries were apportioned to territories on the basis of the total farm value of crops harvested in 1939 (see tables on acreage, production, and value of individual crops for 1939) after deducting principal feed crops (corn, oats, barley, rye, buckwheat, grain sorghums, hay, and sweet sorghums).

3/ Data for states divided by freight rate territory boundaries were apportioned to territories on the basis of the total farm value of livestock and livestock products produced in 1939 (see tables on production and value of individual livestock products), except that gross income from eggs and milk was used in the apportionment in place of farm value.

Source: U. S. D. A., B. A. E., "Gross Farm Income and Government Payments, 1936-1939," July 8, 1940 (mimeographed).

[fol. 5618] thirds and three-quarters, respectively, of their total gross income derived from livestock and livestock products. In Southern territory, however, this situation is reversed, over 61 per cent of Southern territory farm income coming from crops and a trifle over 38 per cent from livestock.

From the standpoint of total United States production, however, all three territories besides Official and Western Trunk Line are relatively low in proportion of gross income produced by livestock and livestock products. Each of the two latter territories accounts for a somewhat greater proportion of the United States total than all of the other three rate areas combined.

Agricultural Resources as Measured by Quality of Land

These differences in relationships between the freight rate territories are due in a considerable degree to differences in the physiographical conditions required for the production of crops and livestock and livestock products. These basic factors, which thus delineate the agricultural resources of the United States, according to a leading authority on this matter are [1]: (1) Topography, lay of the land, and degree and direction of slope; (2) soils, which are influenced greatly in their development by climate and the natural vegetation; (3) temperature and precipitation, of which the duration of the frost-free season and seasonal distribution of precipitation are important.

These physical conditions are obviously of such a character that their conversion into measurable arithmetic or other terms is extremely difficult and necessarily the results of such conversion must be more or less of an approximation. However, one type of such conversion has been made under the direction of Dr. Curtis F. Marbut of the Bureau of Chemistry and Soils, United States Department of Agriculture, by grading all the land of the United States according [fol. 5619] ing to its productivity for crop production, the results of which were published by the National Resources

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[1] O. E. Baker, Senior Agricultural Economist, U. S. D. A., "A Graphic Summary of Physical Features and Land Utilization in the United States," Miscellaneous Publication No. 260, May 1937, p. 2.

Board in 1934.[1] The method used attempts to take into consideration all the principal physiographical conditions influencing productivity such as soil type, topography, rainfall, and temperature. Using these factors, the entire land surface of the United States was classed into five grades of productivity.

> "Grade 1 may be briefly described as excellent land for the staple crops climatically adapted to the region in which its lies; grade 2 as good; grade 3 as fair; grade 4 as poor; and grade 5 as essentially incapable of tillage.
>
> • • • • • • •
>
> "Naturally poorly drained lands were graded according to their productivity under their present condition of drainage, whether they are artificially drained or not. Irrigated lands were graded according to their original nonirrigated condition • • • "[2]

As published in the National Resources Board report the land area of each state was thus classified and these figures have been regrouped by freight rate areas in Table 37.

Western Trunk Line territory is outstanding in its possession of land of grades 1 and 2. Roughly two-thirds of all the land in the United States of grade 1 and nearly half

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[1] National Resources Board, "A Report on National Planning and Public Works in Relation to Natural Resources and Including Land Use and Water Resources with Findings and Recommendations," Dec. 1, 1934, p. 127.

[2] Ibid.

(Here follow 2 photolithographs, side folios 5620-5621.)

Table 37.—Land Area Classified According to Its Productivity, 1/ by Freight Rate Territories

Grouping A 2/

Grade 3/	Territory					United States total
	Official	Southern	Western Trunk Line	Southwestern	Mountain-Pacific	
			(1,000 acres)			
llent	27,410	2,682	64,439	6,034	473	101,038
.....	53,513	22,377	88,411	43,181	3,453	210,935
.....	71,398	74,377	81,885	86,821	11,391	345,872
llent to fair	152,321	99,436	234,735	136,036	35,317	657,845
.....	66,119	76,958	66,549	64,519	86,414	362,559
p. of tillage	54,996	61,626	59,029	74,686	631,398	881,735
All grades .	273,436	238,020	362,313	275,241	753,129	1,902,139
			Percent of territory totals			
	% Cum. %	% Cum. %	% Cum. %	% Cum. %	% Cum. %	% Cum. %
llent	10.03 10.03	1.13 1.13	17.79 17.79	2.19 2.19	0.06 0.06	5.31 5.31
.....	19.57 29.60	9.40 10.53	24.40 42.19	15.69 17.88	.46 .52	11.09 16.40
.....	26.11 55.71	31.25 41.78	22.60 64.79	31.54 49.42	4.17 4.69	18.18 34.58
llent to fair	24.18 79.89	32.33 74.11	18.92 83.71	23.44 72.86	11.47 16.16	19.06 53.64
.....	20.11 100.00	25.89 100.00	16.29 100.00	27.14 100.00	83.84 100.00	46.36 100.00
p. of tillage						
All grades .	100.00	100.00	100.00	100.00	100.00	100.00
			Percent of U.S. totals			
llent	27.13	2.65	63.78	5.97	0.47	100.00
.....	25.37	10.61	41.91	20.47	1.64	100.00
llent to fair	20.64	21.50	23.68	25.10	9.08	100.00
.....	23.15	15.12	35.68	20.68	5.37	100.00
p. of tillage	18.24	21.23	18.91	17.79	23.83	100.00
All grades .	6.24	6.99	6.69	8.47	71.61	100.00
	14.38	12.51	19.05	14.47	39.59	100.00

(Continued)

Table 37.—Land Area Classified According to Its Productivity, 1/ by Freight Rate Territories (Continued)

Grouping B 2/

- Grade 3/	Territory: Official	Southern	Western Trunk Line	Southwestern	Mountain-Pacific	United States total
	(1,000 acres)					
xcellent	25,160	3,971	66,690	4,744	473	101,038
ood	40,899	29,003	97,658	40,208	3,167	210,935
air	56,731	91,004	94,313	79,474	24,350	345,872
xcellent to fair	122,790	123,978	258,661	124,426	27,990	657,845
oor	51,578	96,713	89,522	52,076	72,670	362,559
ncap. of tillage	36,374	72,050	117,523	69,661	586,127	881,735
All grades .	210,742	292,741	465,706	246,163	686,787	1,902,139
	Percent of territory totals					
	% Cum. %	% Cum. %	% Cum. %	% Cum. %	% Cum. %	% Cum. %
xcellent	11.94 11.94	1.35 1.35	14.32 14.32	1.93 1.93	0.07 0.07	5.31 5.31
ood	19.41 31.35	9.91 11.26	20.97 35.29	16.33 18.26	.46 .53	11.09 16.40
air	26.92 58.27	31.09 42.35	20.25 55.54	32.29 50.55	3.55 4.08	18.18 34.58
oor	24.47 82.74	33.04 75.39	19.22 74.76	21.15 71.70	10.58 14.66	19.06 53.64
cap. of tillage	17.26 100.00	24.61 100.00	25.24 100.00	28.30 100.00	85.34 100.00	46.36 100.00
All grades .	100.00	100.00	100.00	100.00	100.00	100.00
	Percent of U.S. totals					
xcellent	24.90	3.93	66.03	4.70	0.47	100.00
ood	19.39	13.75	46.30	19.06	1.50	100.00
air	16.40	26.31	27.27	22.98	7.04	100.00
xcellent to fair	18.67	18.85	39.32	18.91	4.25	100.00
oor	14.23	26.68	24.69	14.36	20.04	100.00
cap. of tillage	4.13	8.17	13.33	7.90	66.47	100.00
All grades .	11.08	15.39	24.48	12.94	36.11	100.00

Graded according to ability to produce without irrigation, or without additional drainage.
The variation between Grouping A and Grouping B is due to a difference in the allocation of states divided by freight rate territory boundaries as follows:

State	Grouping A	Grouping B
Michigan	Official	Western Trunk Line
Wisconsin	Western Trunk Line	Western Trunk Line
Virginia	Official	Southern
Louisiana	Southwestern	Southern
Colorado	Mountain-Pacific	Western Trunk Line

For more exact statement, see text.
urce: National Resources Board, "A Report on National Planning ...," December 1, 1934, p. 127.

of all the land of grade 2 is in this area. Official territory, [fol. 5622] however, ranks second in both, though possessing an insignificant margin over Southwestern territory in this respect so far as grade 2 land is concerned. Together, Western Trunk Line and Official territory account for over 90 percent of the total grade 1 land in the United States and for just short of two-thirds of the total grade 2 land. No one of the other three territories possesses as much as 5 per cent of the grade 1 land. Official territory contains by far the smallest proportion of the total land area essentially incapable of tillage.

The proportion of the United States total of each grade of land which is included within the Western Trunk Line and Official territories declines consistently through all five grades as the quality of the land decreases. Exactly the reverse, however, is true of the Mountain-Pacific division and of the first four grades in Southern territory and the first three in Southwestern.

A comparison of territories on the basis of the proportion of their area in each grade of land further substantiates the leading positions of Western Trunk Line and Official territories. A higher porportion of the land in Western Trunk Line territory belongs in Grades 1 and 2 than in any other area, Official territory ranking second in both cases. About 40 per cent of the land area of the Western Trunk Line territory belongs in Grades 1 and 2 and nearly one-third of that in Official classification territory. The proportion of both grades combined is much lower in Southern, Southwestern, and Mountain-Pacific divisions. In the Mountain-Pacific area there are less than 500,000 acres of Grade 1 land out of around 700 million total acres. Less than 3 percent and only a little more than 1 percent of the total Grade 1 land are found in Southwestern and Southern territories, respectively. Southwestern territory, however, has a proportion of Grade 2 land not greatly below the proportion of Official classification territory, but Southern territory shows less than 10 percent of its total land in this classification and less than ½ of 1 percent of the Mountain-Pacific division is found in Grade 2. Less than 20 percent of the Southwestern land belongs to these two groups and only a trifle over 10 percent in Southern territory. This situation continues to be true when Grade 3 land is included, about 60 percent of Western Trunk Line area being in grades from excellent to fair, as compared

[fol. 5623] with over 55 percent for Official classification territory, about 50 percent for Southwestern, and nearly 42 percent for the Southern area.

Although nearly all the land in the Mountain-Pacific division belongs in Grades 4 and 5, this figure is somewhat misleading because some of this Grade 4 and 5 acreage is under irrigation. In addition, there are also considerable areas of irrigated land in both Western Trunk Line and Southwestern territories. The data in Table 38 show that irrigation enterprises are capable of supplying water to over 26 million acres of land, about 83 percent of which is located in the Mountain-Pacific division. The figures shown in this table with regard to irrigable lands are to be taken as a qualification of the grades of land distributed by freight rate territories shown in the preceding tables.

If we assume that all the land, for which present enterprises are capable of supplying water, are of Grades 4 and 5, and that irrigation would make them as productive as land of Grades 1 and 2, we have the comparison of territories shown in Table 38-A.

(Here follows 2 photolithographs, side folios 5624-5625)

Table 38. - Irrigable Lands of the Western States, by Freight Rate Territories 1/

Territories	Irrigable area that present enterprises were capable of supplying with water in 1940 2/		Ultimate irrigable area 3/	
	1,000 acres	Percent of total	1,000 acres	Percent of total
Western Trunk Line 4/	2,413	9.08	5,481	10.43
Southwestern	2,192	8.24	3,439	6.55
Mountain-Pacific ...	21,982	82.68	43,620	83.02
Total (19 western states) 5/	26,587	100.00	52,540	100.00

1/ Data for Colorado allocated to territories on the basis of the area that enterprises were capable of supplying with water in 1929 (Census county figures). All of Louisiana was included in Southwestern territory since over 98 percent of the irrigable area of the state as of 1929 was in this territory.

2/ Sources: (1) U.S. Department of Interior, Bureau of Reclamation, "Irrigable Acreage Private and Federal Irrigation Enterprises Were Capable of Supplying with Water in 16 Western States in 1940." Map No. 41-8 prepared from records of Bureau of Reclamation, Office of Indian Affairs, and Bureau of Census (1930); and (2) Fifteenth Census of U. S., 1930, "Irrigation of Agricultural Lands," (data for Kansas, Arkansas, and Louisiana).

3/ Sources: (1) National Resources Board, "Land Available for Agriculture through Reclamation," Part IV of the Supplementary Report of the Land Planning Committee, 1934; and (2) Fifteenth Census of U. S. 1930, "Irrigation of Agricultural Lands" (data for Arkansas and Louisiana).

4/ Excluding Minnesota, Wisconsin, Michigan, Iowa, and Missouri having negligible amounts for which data are not reported.

5/ Washington, Oregon, California, Idaho, Nevada, Utah, Arizona, Montana, Wyoming, Colorado, New Mexico, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, Arkansas, and Louisiana.

Table 38-A. - Land Area Classified According to Its Productivity, by Freight Rate Territories, after Giving Consideration to Irrigation

Grade	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
			Grouping A 1/			
1 and 2	80,923	25,059	155,253	51,407	25,908	338,560
3	71,398	74,377	81,835	86,821	31,391	345,872
4 and 5	121,115	138,584	125,165	137,013	695,830	1,217,707
All grades	273,436	238,020	362,313	275,241	753,129	1,902,139
			Percent of U. S.			
1 and 2	23.90	7.40	45.86	15.19	7.65	100.00
3	20.64	21.50	23.68	25.10	9.08	100.00
4 and 5	9.95	11.38	10.28	11.25	57.14	100.00
All grades	14.38	12.51	19.05	14.47	39.59	100.00
			Grouping B 1/			
1 and 2	66,059	32,974	166,761	47,144	25,622	338,560
3	56,731	91,004	94,313	79,474	24,350	345,872
4 and 5	87,952	168,763	204,632	119,545	636,815	1,217,707
All grades	210,742	292,741	465,706	246,163	686,787	1,902,139
			Percent of U. S.			
1 and 2	19.51	9.74	49.26	13.92	7.57	100.00
3	16.40	26.31	27.27	22.98	7.04	100.00
4 and 5	7.22	13.86	16.80	9.82	52.30	100.00
All grades	11.08	15.39	24.48	12.94	36.11	100.00

1/ The variation between Grouping A and Grouping B is due to a difference in the allocation of states divided by freight rate territory boundaries as follows:

State	Grouping A	Grouping B
Michigan	Official	Western Trunk Line
Wisconsin	Western Trunk Line	Western Trunk Line
Virginia	Official	Southern
Louisiana	Southwestern	Southern
Colorado	Mountain-Pacific	Western Trunk Line

Sources: Tables 37 and 38.

[fol. 5626] Thus, by regarding land by arbitrarily assigning higher grades to lands capable of irrigation the percent of the better grades of land in the western territories is somewhat advanced. Mountain-Pacific territory, under the revised comparison, has approximately 7½ percent of the land of the U. S. of Grades 1 and 2 as compared with slightly over 1 percent under the original classification. This reclassification of lands places Mountain-Pacific territory about on a par with Southern territory with respect to excellent and good lands. The effect on Southwestern territory is opposite, changing the percent of U. S. total of Grades 1 and 2 from 15.78 in Grouping A and 14.41 in Grouping B to 15.19 in Grouping A and 13.92 in Grouping B. Thus, even though the better grades of land are increased, their relative standing in relation to other territories is decreased, due to the greater amount of increase in the United States total of Grades 1 and 2. The change also tends to lower the position of Western Trunk Line territory, although it is still the outstanding leader in excellent and good lands. The percents of the better lands in Official and Southern territories are naturally reduced somewhat due to the addition of approximately 27 millions of acres to the national total. The comparison of territories in relation to Grade 1 and 2 lands before and after taking irrigation into account follows:

Territory	Without considering irrigation		After considering irrigation	
	Grouping A	Grouping B	Grouping A	Grouping B
Official	25.94	21.17	23.90	19.51
Southern	8.03	10.57	7.40	9.74
Western Trunk Line	48.99	52.68	45.86	49.26
Southwestern	15.78	14.41	15.19	13.92
Mountain-Pacific	1.26	1.17	7.65	7.57

The data for ultimate irrigable area (Table 38) are based on estimates of State engineers and U. S. Army engineers and represent the maximum acreage for which water could be economically provided. The estimates were made for 17 States only, the data for Arkansas and Louisiana being provided by the 1930 census figures on area which enter-[fol. 5627] prises were capable of supplying with water in 1930. The State engineers' and Army engineers' estimates are somewhat higher than the Bureau of Reclamation

estimates for the same 17 states. According to a statement of G. W. Lineweaver, Office of Information, Bureau of Reclamation, on March 25, 1941, the Bureau of Reclamation engineers estimate that there are approximately 22 million acres of land for which water can be economically provided in addition to the land in enterprises as of the Census of 1930. The State and Army engineers' estimate for the same 17 states is 26,436,050 acres.

Agricultural Resources as Measured by the Distribution of Land Used for Agriculture

Differences in agricultural resources apparently account in no small degree for variations between the territories in terms of the total agricultural income which has been discussed in a preceding section. In the following sections there are presented the data with regard to crop and livestock production with some attempt to relate these differences in production to the resources of these areas. The present section distributes the total land area of the United States according to freight rate territories and land use. The following sections analyze the distribution of production of various crops and livestock and livestock products between the freight rate territories.

Table 39 shows the present way in which the land area of the various freight rate territories is being used for agricultural purposes. Over 38 percent of the total land area of the United States is included in the Mountain-Pacific rate territory and nearly 21 percent in the Western Trunk Line freight area. The remaining acreage is divided rather equally between the remaining three territories, the difference between the three being slightly less than 1 point per cent of the total land area of the United States.

Examination of this table shows that Western Trunk Line territory leads in acreage of total farm land with just under 30 percent of the national total. The Mountain-Pacific division ranks second with a little over 22 percent, followed by Southwestern, Official, and Southern territories in the order named.

(Here follows 1 photolithograph, side folio 5628)

Table 39.—Land Area, by Uses and Freight Rate Territories, 1/ 1940

Item	Territory: Official	Southern	Western Trunk Line	Southwestern	Mountain-Pacific	United States total
			(Acres)			
Cropland in farms	78,873,516	57,112,333	160,439,408	61,154,583	41,668,556	399,248,396
Mowable pasture in farms	27,754,002	20,650,542	45,019,089	20,337,169	17,163,656	130,924,458
Potential cropland .	106,627,518	77,762,875	209,458,497	81,491,752	58,832,212	534,172,854
Other land in farms	56,704,588	68,833,287	111,575,333	117,817,995	175,403,289	530,334,501
Total land in farms.	163,332,106	146,596,162	317,033,830	199,309,747	234,235,510	1,060,507,355
Other land	94,029,174	105,632,318	80,584,730	71,213,253	491,244,810	842,709,285
Total land area 2/ .	257,361,280	252,228,480	397,618,560	270,528,000	725,480,320	1,903,216,640
			Percent of territory totals			
Cropland in farms	30.65	22.64	40.35	22.60	5.74	20.98
Mowable pasture in farms	10.78	8.19	11.32	7.52	2.37	6.88
Potential cropland .	41.43	30.83	51.67	30.12	8.11	27.86
Other land in farms	22.03	27.29	28.06	43.55	24.18	27.86
Total land in farms.	63.46	58.12	79.73	73.67	32.29	55.72
Other land	36.54	41.88	20.27	26.33	67.71	44.28
Total land area 2/	100.00	100.00	100.00	100.00	100.00	100.00
			Percent of U. S. totals			
Cropland in farms	19.76	14.30	40.18	15.32	10.44	100.00
Mowable pasture in farms	21.20	15.77	34.39	15.53	13.11	100.00
Potential cropland .	20.11	14.67	38.75	15.37	11.10	100.00
Other land in farms	10.69	12.98	21.04	22.22	33.07	100.00
Total land in farms.	15.40	13.82	29.90	18.79	22.09	100.00
Other land	11.16	12.54	9.56	8.45	58.29	100.00
Total land area 2/ .	13.52	13.25	20.89	14.22	38.12	100.00

1/ Data for states divided by freight rate territories were apportioned on the basis of county figures as shown in the Census reports of 1930. At the time this table was prepared, county figures were not released for the Census of 1940.

2/ Total land area as of 1930.

Sources:

Fifteenth Census of U. S., 1930, Agriculture, Volume II (state and county figures).

Sixteenth Census of U. S., 1940, Agriculture, "United States Summary", Special release, Feb. 5, 1941 (processed).

[fol. 5629] In terms of the potential crop land in 1940, however, the order of importance differs radically from this showing in certain respects. Potential crop land in 1940, as shown in the table, is the sum of the crop land in farms plus the plowable pasture land in farms as computed by the Census Bureau. On this basis, Western Trunk Line territory assumes a very much greater importance in comparison with the other territories than on the basis of the total land in farms, the potential crop land of this rate territory representing nearly 40 percent of the total for the United States. The Mountain-Pacific division, which ranks second in total land area in farms, shows a smaller acreage of crop land in farms and of plowable pasture in farms together than any other rate territory, with the result that the total potential crop land of this area in 1940 was only a little in excess of 11 percent of the total for the United States. In terms of potential crop land, second position is assumed by Official territory with approximately 20 percent of the total, followed by the Southwestern area with about 15.4 percent and the Southern territory with about 14.7 percent.

The total land in farms shown in the foregoing table does not represent all the land devoted to agricultural uses because there is an enormous proportion of the total land area of the United States outside of land in farms which is used for pasture. This acreage aggregates 31 percent of the total land area of the United States and is located for the most part, as of 1930, in the three western freight rate territories, more particularly in the Mountain-Pacific division. The acreages of these pasture lands for the western freight rate territories are as follows as of 1930:[1]

Territory	Pasture not in farms	Land area	Percent of land area
	(1,000 acres)		
Western Trunk Line	15,637	397,619	3.93
Southwestern	56,427	270,528	20.86
Mountain-Pacific	358,530	725,480	49.42
Total	430,594	1,393,627	30.90

[1] U. S. D. A., B. A. E., "Trends in Land Utilization, 1879-1929." Special table prepared for the I. C. C. by Claude C. Haren, Jr., Agricultural Economist, Land Economics Division, on June 19, 1940.

[fol. 5630] The relative disadvantage in 1940 of the Mountain-Pacific territory in terms of either crop land in farms or potential crop land in farms is somewhat offset by the enormous acreage available for grazing purposes. Similarly, the agricultural resources of both the Western Trunk Line and Southwestern territories are increased by the existence of this grazing land which is not shown by the figures of either crop land in farms or potential crop land as shown in the preceding table.

Agricultural Resources as Measured by Potential Production of Crops

Potential production of certain major crops for each territory was determined by applying the maximum yield per acre in the past to the maximum acreage in the past for each state comprising the territory. Maximum yield and acreage figures were obtained from the United States Department of Agriculture revised estimates[1] of acreage, yield, and production and cover the period 1879-1939, inclusive, with shorter periods for certain crops as indicated in the footnotes to tables for individual crops (Tables 53 to 74, inclusive). Data for states divided by freight rate territory boundaries were apportioned to territories on the basis of 1929 Census county figures for individual crops.[2]

This method of estimating potential production (by maximum acreage and maximum yield in the past) assumes that the same amount of acreage used in the production of a particular crop in the past can be called into production in the future if sufficient demand for that crop should arise. Variations in yields in the past appear to be due chiefly to weather and other random conditions rather than to long-term trends in yields per acre. According to H. E. Selby of the United States Department of Agriculture:

> [fol. 5631] "Average yields of important crops have not changed significantly for several decades, except for a decline in the average cotton crop as a result of boll weevil infestation, and a recent increase in corn crops through the use of hybrid seed.

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[1] Revised by U. S. D. A. to provide comparable data throughout a series of years.

[2] For more complete discussion, see following section.

"Apparently soil erosion and depletion and an extension of cultivation to inferior lands have been just about balanced by improved crop varieties and cultural practices and by shifts in production from depleted land to new land."[1]

In discussing the productivity of new lands brought into the production of wheat, O. E. Baker says:

". . . The new land brought into use for crops will be of lower productivity, but the higher yields per acre on the old lands resulting from the wider use of fertilizer and better cultivation will probably neutralize these lower yields."[2]

Potential production was computed for twenty crops for which revised figures on acreage and yield are available. These twenty crops in 1939 made up 94.83 percent of total harvested acreage of the United States, as computed previously in this report (see Table 44). The percent of all crops, by territories, of the 20 crops studied are as follows:

	Percent
Official	90.57
Southern	91.87
Western Trunk Line	98.79
Southwestern	97.82
Mountain-Pacific	88.22

[fol. 5632] A summary of the maximum acreage of the 20 crops is shown in Table 40. These acreage figures are only valid when considered individually because, obviously, if land is planted to corn, the same land cannot also be available for the production of wheat in the same year. In order to indicate that the maximum acreages are not fantastic figures, however, maximum acreages of all crops were added

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[1] H. E. Selby, Bureau of Ag. Econ., U. S. D. A., "How Many Acres Do We Require?", Land Policy Review, Vol. III, September 1940, p. 10.

[2] O. E. Baker, Agricultural Economist, U. S. D. A., "The Potential Supply of Wheat," art. in Economic Geography, Vol. I, March 1925, p. 40.

together for each territory and compared with potential cropland (see Table 39). This comparison is as follows:

Territory	Maximum acreage of 20 crops	Potential cropland 1939
	(1,000 acres)	
Official	99,605	106,628
Southern	69,739	77,763
Western Trunk Line	202,000	205,458
Southwestern	74,988	81,492
Mountain-Pacific	36,897	58,832
United States	483,229	530,173

Even if account is taken of the fact that the 20 crops do not cover all of the crop acreage, the maximum acreage figures do not seem excessive.

Table 41 shows a summary of potential production found by applying maximum yields to maximum acreages (discussed above). Discussion of potential acreage and production of individual crops is reserved for a later section in order that comparisons can be made with 1939 figures.

Agricultural Resources as Measured by 1939 Crop Production

General Discussion

The measurement of the agricultural resources of the freight rate territories in terms of present production of crops, livestock and livestock products has been based upon the year 1939. This has been done for two reasons. In the first place, the 1939 figures are the latest which are available at the present writing, and, secondly, these figures are

(Here follow 2 photolithographs, side folios 5633-5634)

Table 40.--Potential Acreage of Principal Crops, by Freight Rate Territories

Crop	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(1,000 acres)					
All corn	29,309	25,961	54,933	16,171	1,463	127,837
All wheat	17,433	5,139	51,355	10,373	13,772	98,072
Oats	15,454	3,947	27,010	4,002	2,279	52,692
Barley	2,170	137	11,476	599	2,644	17,026
Rye	2,854	284	5,629	90	347	9,204
Buckwheat	995	43	277	-	-	1,325
Flaxseed	25	-	5,026	18	674	5,743
Rice	-	64	10	1,147	162	1,383
Grain sorghums	-	-	3,529	6,234	585	10,348
Cotton	14	19,408	558	28,394	1,076	49,452
Tame hay	27,727	8,240	21,800	3,092	10,133	70,992
Wild hay	515	372	14,855	1,128	2,653	19,523
Sweet sorghums	33	381	3,416	2,268	53	6,151
Peanuts	79	2,396	-	652	-	3,127
Potatoes	2,287	410	1,747	209	538	5,191
Sweetpotatoes	105	660	25	307	18	1,115
Tobacco	396	2,119	49	3	-	2,567
Sugarcane for sugar	-	41	-	253	-	294
Sugarcane for syrup	-	137	-	48	-	185
Sugar beets	209	-	305	-	498	1,012
All crops	99,605	69,739	202,000	74,988	36,697	483,229
	Percent of U. S. total					
All corn	22.93	20.31	42.97	12.65	1.14	100.00
All wheat	17.78	5.24	52.36	10.58	14.04	100.00
Oats	29.33	7.49	51.25	7.60	4.32	100.00
Barley	12.74	.81	67.40	3.52	15.53	100.00
Rye	31.00	3.08	61.16	.98	3.78	100.00
Buckwheat	75.64	3.31	21.05	-	-	100.00
Flaxseed	.43	-	87.52	.31	11.74	100.00
Rice	-	4.60	.72	82.97	11.71	100.00
Grain sorghums	-	-	34.10	60.25	5.65	100.00
Cotton	.03	39.24	1.13	57.42	2.18	100.00
Tame hay	39.06	11.61	30.71	4.35	14.27	100.00
Wild hay	2.64	1.90	76.09	5.78	13.59	100.00
Sweet sorghums	.54	6.19	55.54	36.87	.86	100.00
Peanuts	2.52	76.63	-	20.85	-	100.00
Potatoes	44.06	7.90	33.66	4.03	10.35	100.00
Sweet potatoes	9.42	59.19	2.24	27.53	1.62	100.00
Tobacco	15.42	82.55	1.91	.12	-	100.00
Sugarcane for sugar	-	14.03	-	85.97	-	100.00
Sugarcane for syrup	-	74.05	-	25.95	-	100.00
Sugar beets	20.65	-	30.14	-	49.21	100.00
All crops	20.61	14.43	41.80	15.52	7.64	100.00

Sources: See Tables 53 to 74.

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Table 41.--Potential Production of Principal Crops, by Freight Rate Territories

Crop	Unit	Territory					United States total
		Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
All corn	1,000 bu.	1,412,391	541,938	2,255,105	437,227	42,668	4,689,329
All wheat	1,000 bu.	434,500	88,157	1,072,008	186,568	372,024	2,153,257
Oats	1,000 bu.	648,218	93,355	1,121,647	141,215	94,593	2,099,028
Barley	1,000 bu.	70,785	3,469	334,330	15,324	90,513	514,421
Rye	1,000 bu.	46,965	3,293	100,609	1,185	5,812	157,864
Buckwheat	1,000 bu.	21,298	690	4,137	-	-	26,125
Flaxseed	1,000 bu.	327	-	62,649	207	10,089	73,272
Rice	1,000 bu.	-	2,086	750	56,899	12,377	72,112
Grain sorghums	1,000 bu.	-	-	57,842	117,432	14,290	189,564
Cotton	1,000 bales 1/	10	12,877	655	17,259	1,335	32,136
Tame hay	1,000 tons 2/	40,187	9,635	38,209	4,896	24,227	117,154
Wild hay	1,000 tons 2/	733	464	17,960	1,354	3,249	23,760
Sweet sorghums	1,000 tons 2/	81	821	8,244	3,802	89	13,037
Peanuts	1,000 lbs.	96,444	2,058,081	-	440,630	-	2,595,155
Potatoes	1,000 bu.	364,006	46,994	228,331	18,196	115,411	772,938
Sweetpotatoes	1,000 bu.	16,247	71,684	3,155	32,593	3,202	126,881
Tobacco	1,000 lbs.	460,855	1,990,673	61,534	2,049	-	2,515,161
Sugarcane for sugar	1,000 tons 2/	-	1,254	-	5,487	-	6,741
Sugarcane for syrup	1,000 gal.	-	24,581	-	13,311	-	37,892
Sugar beets	1,000 tons 2/	2,101	-	4,483	-	7,546	14,130
		Percent of U. S. totals					
All corn		30.12	11.56	48.09	9.32	0.91	100.00
All wheat		20.18	4.09	49.79	8.66	17.28	100.00
Oats		30.88	4.45	53.44	6.73	4.50	100.00
Barley		13.76	.67	64.99	2.98	17.60	100.00
Rye		29.75	2.09	63.73	.75	3.68	100.00
Buckwheat		81.52	2.64	15.84	-	-	100.00
Flaxseed		.45	-	85.50	.28	13.77	100.00
Rice		-	2.89	1.04	78.91	17.16	100.00
Grain sorghums		-	-	30.51	61.95	7.54	100.00
Cotton		.03	40.07	2.04	53.71	4.15	100.00
Tame hay		34.30	8.22	32.62	4.18	20.68	100.00
Wild hay		3.08	1.96	75.59	5.70	13.67	100.00
Sweet sorghums		.62	6.30	63.24	29.16	.68	100.00
Peanuts		3.72	79.30	-	16.98	-	100.00
Potatoes		47.09	6.08	29.54	2.36	14.93	100.00
Sweetpotatoes		12.80	56.50	2.49	25.69	2.52	100.00
Tobacco		18.32	79.15	2.45	.08	-	100.00
Sugarcane for sugar		-	18.60	-	81.40	-	100.00
Sugarcane for syrup		-	64.87	-	35.13	-	100.00
Sugarbeets		14.87	-	31.73	-	53.40	100.00

1/ 500 lbs. gross weight.
2/ 2,000 lbs.

Sources: See Tables 53 to 74.

[fol. 5635] relatively close to the average for recent years. From 1926 to 1939, for example, the total acreage harvested ranged from 296 to 364 million acres and the average for the period is about 341.6 million. For the year 1939 the total acreage harvested was a little under 325.5 million which is only 4.7 percent below the average for the entire period. Similarly the gross income from crops and livestock combined for the same period ranges from a little over 5.3 billion dollars to over 11.9 billion, the average figure for the period being a little over 9 billion. In 1939 the total gross income of almost 9 billion was only 1.2 percent below the average figure for the entire period.

Table 42 shows in detail the yearly figures on which the foregoing statements are based, together with the subdivisions of gross income as between crops and livestock. It will be noted that the crop and livestock figures for 1939 similarly fall well within the rang[redacted] the total for the period and that the figure for crops is so[redacted]what below the average whereas the figure for livestock is somewhat higher than the average.

(Here follows 1 photolithograph, side folio 5636)

Table 42. - Harvested Acreage of Principal Crops and Gross Farm Income from Crops and Livestock, United States, 1926-1939

Year	Acreage of 46 principal crops harvested	Gross income from		
		Crops	Livestock	Crops and livestock
	(1,000 acres)	(Million dollars)		
1926	351,061	5,468	6,012	11,480
1927	350,577	5,817	5,799	11,616
1928	353,632	5,675	6,066	11,741
1929	356,989	5,434	6,507	11,941
1930	361,101	3,818	5,636	9,454
1931	357,374	2,746	4,222	6,968
1932	363,609	2,295	3,042	5,337
1933	331,929	3,032	3,096	6,128
1934	295,936	2,977	3,704	6,681
1935	336,470	3,425	4,585	8,010
1936	315,640	4,022	5,606	9,628
1937	340,605	4,355	5,847	10,202
1938	341,744	3,541	5,339	8,880
1939	325,449	3,662	5,300	8,962
Average	341,580	4,019	5,054	9,073

Sources:

U.S.D.A., "Agricultural Statistics," 1940, p. 542.
U.S.D.A., "Agricultural Statistics," 1938, p. 432.
U.S.D.A., B.A.E., "Gross Farm Income and Government Payments, 1936-1939," July 8, 1940 (mimeographed).

[fol. 5637] Data on acreage and production of principal crops by freight rate territories were taken from the preliminary figures of the United States Department of Agriculture published in "Agricultural Statistics," 1940.[1] Farm value by territories was computed by applying season average state prices, as reported in "Agricultural Statistics," to the production of the states comprising each territory.[2] Farm values computed from other preliminary data by the U. S. D. A. for certain major crops show slightly different figures.[3] Final price data were not available at the time the tables were prepared.

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[1] Except data for sweet sorghums, which were not reported in this source, but were taken from U. S. D. A., "Crops and Markets," Dec. 1939, p. 273.

[2] Exceptions to this procedure are as follows:

(1) December 1 prices, rather than season average prices, were reported for tame and wild hay, dry field peas, velvet beans, and sugarcane for syrup.

(2) Farm value of commercial truck crops was reported in "Agricultural Statistics," making no computation necessary.

(3) Prices were not reported for sugar beets, hence farm value of this crop was taken from "Farm Production, Farm Disposition, and Value of Principal Field Crops, 1937-1939," U. S. D. A., Agricultural Marketing Service, April 1940.

(4) Neither farm value nor farm prices were reported by states for sweet sorghums, which made it necessary to apportion the United States total farm value to territories on the basis of production.

[3] The following is a comparison of the farm values used in this report with the farm values computed by the U. S. D. A. from later preliminary figures for certain major crops:

	As computed in this report	As reported by U. S. D. A.
	(1,000 dollars)	
Corn	1,464,339	1,473,773
Hay, tame and wild	641,691	654,838
Wheat	510,674	534,661
Oats	276,909	289,693
Barley	111,702	110,684
Soybeans	67,489	70,887
Sweet potatoes	54,415	54,442

[fol. 5638] Census county figures for 1929 were used as the basis for apportioning 1939 state figures to territories for those states which are divided by freight rate territory boundaries (Michigan, Wisconsin, Virginia, Louisiana, and Colorado).[1] Generally the state figures for each crop were apportioned on the basis of the acreage of that crop harvested in 1929. Cases in which acreage harvested in 1929 was not obtainable were apportioned on the basis of production in 1929.

The crops included in this study represent 329,814,000 harvested acres or 99.64 percent of the 331,015,000 acres

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[1] Counties divided by freight rate territories are allocated as follows:

In Wisconsin:

Dane, Green, Jefferson, Milwaukee, and Waukesha counties to Official territory;

Iowa and Lafayette counties to Western Trunk Line territory;

In Virginia:

Brunswick:

Brunswick, Charlotte, Lunenburg, Montgomery, Nansemond, Norfolk, Pittsylvania, Pulaski, Greensville, and Southampton counties to Southern territory;

Bedford, Campbell, Giles, Isle of Wight, Prince Edward, Roanoke, and Sussex counties to Official territory;

In Louisiana:

Ascension, Orleans, Plaquemines, and St. John the Baptist parishes to Southern Territory;

Iberville, Jefferson, St. Charles, and St. James parishes to Southwestern territory;

In Colorado:

Adams, Arapahoe, Denver, Douglas, El Paso, Las Animas, Pueblo, and Weld counties to Western Trunk Line territory;

Boulder, Huerfano, Jefferson, and Larimer counties to Mountain-Pacific territory.

All of Wyoming was allocated to Mountain-Pacific territory, and all of West Virginia was allocated to Official territory. All counties in the lower peninsula of Michigan were allocated to Official territory and all counties in the upper peninsula to Western Trunk Line territory.

reported in the summary of crops harvested shown in "Agricultural Statistics," 1940.[1]

[fol. 5639] Table 43 gives a summary of acreage harvested and the value of crops by freight rate territories in 1939. Western Trunk Line is outstanding in the number of acres harvested, this territory accounting for nearly 39 percent of the United States total. This figure is not far from double the nearly 22 percent of the total United States acreage which was harvested in Official classification territory and is almost exactly equal to the combined total for the Southern, Southwestern, and Mountain-Pacific divisions (39.25 percent). Although the Mountain-Pacific division includes about 38 percent of the total land area of the United States (Table 39), the territory accounts for slightly less than 9 percent of the total acreage harvested in the United States. This situation is no doubt related to the fact that almost 84 percent of this area is classified in the National Resources Committee's report as incapable of tillage and that less than 5 percent of the remaining area is land classed as excellent to fair (Table37).

Although Western Trunk Line territory far outstripped Official territory in 1939 in the proportion of the total crop acreage harvested, Official classification territory led the Western Trunk Line area in the total dollar value produced by a little over 2 points percent, a comparatively narrow margin (27.64 percent against 25.41 percent). Southern territory ranked third with a little under 21 percent of the crop value while the Southwestern and Mountain-Pacific divisions both fell below 14 percent of the total.

The proportions of crop value produced in Official, Southern, and Mountain-Pacific territories outranked the proportions of total United States acreage harvested in these areas whereas the reverse is true for the Western Trunk Line and Southwestern territories. These differences in ranking of the territories in acreage and crop value are accounted for, of course, by the difference in the average value produced per acre. Western Trunk Line territory with nearly 39 percent of the total acreage harvested showed the lowest average value of crops produced per acre ($10.67) while Mountain-Pacific division with far and away the smallest amount of acreage harvested reported the highest average value produced per acre ($26.10). The

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[1] U. S. D. A., "Agricultural Statistics," 1940, p. 542.

differences in total value produced per acre are due in considerable measure to the differences in the type of crops grown as well as to the differences in yields per acre and prices per unit.

(Here follows 1 Photolithograph, side folio 5640)

Table 43. - Acreage and Value of Total Principal Crops,[1/] by Freight Rate Territories, 1939

Territory	Acreage harvested		Farm Value		Average value produced per acre
	1,000 acres	Percent of U.S.	1,000 dollars	Percent of U.S.	(Dollars)
Official	71,983	21.83	1,439,438	27.54	20.69
Southern	52,798	16.01	1,130,413	20.97	21.41
Western Trunk Line	128,369	38.92	1,369,188	25.41	10.67
Southwestern	47,873	14.51	649,082	12.04	13.56
Mountain-Pacific	26,796	8.73	751,387	13.94	26.10
United States	329,814	100.00	5,389,508	100.00	16.34

1/ This table summarizes the crops shown in detail in Tables 44 and 47.

Sources:
U.S.D.A., "Crops and Markets," Dec. 1939.
U.S.D.A., "Agricultural Statistics," 1940.
U.S.D.A., "Farm Production, Farm Disposition, and Value of Principal Field Crops, 1937-1939, by States," April 1940 (mimeographed).
Fifteenth Census of U. S., 1930, Agriculture, Volume II (state and county figures).

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[fol. 5641] *Acreage Harvested for 29 Principal Crops*

Table 44 shows the acreage of each of the 29 principal crops harvested for the United States and for each of the freight rate territories.[1] It also shows the percent distribution of the U. S. Acreage of each crop by territories and the percent distribution of the crops within each freight rate territory. Only 5 crops, corn, tame hay, wheat, oats, and cotton had a total harvested acreage of 20 million acres or more, and these five crops accounted for 78 percent of the entire acreage harvested in this country in 1939. Table 47 following shows that these 5 crops also account for nearly 63 percent of the total farm value of the principal crops. It is obvious, therefore, that these 5 crops exercise a profound influence on the agricultural economy not only of the United States as a whole, but also of the various freight rate territories.

In wheat, corn, and oats Western Trunk Line leads all others in acreage harvested. Southwestern leads in cotton, and Official territory in tame hay. However, if tame hay and wild hay are combined, the Western Trunk Line territory leads in total hay acreage. In corn and oats Official territory ranks second, but is somewhat outranked by the Mountain-Pacific territory in wheat. Southern territory, of course, ranks second to Southwestern in the production of cotton.

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[1] Duplicated acreages have been eliminated in so far as possible, hence the number of crops for which acreage is shown is considerably less than the number of crops for which production and value are shown. Furthermore, since acreage for individual fruit and nut crops was not reported, acreage for all fruits and nuts as of 1939 (5,344 acres) was apportioned to freight rate territories on the basis of the territorial distribution of land in orchard fruits, vineyards, and planted nut trees as reported in the Census of 1930. The acreage of fruits and nuts by territories, therefore, should be considered as only approximate.

Table 44.--Acreage of Principal Crops Harvested, by Freight Rate Territories, 1939 1/

(Thousand acres)

Crops	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
Corn, all	22,135	21,820	34,154	9,898	746	88,803
Hay, all tame	22,026	8,111	17,140	3,044	8,026	58,347
Wheat, all	8,291	1,663	27,933	7,123	8,786	53,696
Oats	8,683	1,562	18,750	2,672	1,403	33,070
Cotton	4	9,301	377	13,495	608	23,785
Barley	1,032	124	8,757	575	2,112	12,600
Hay, wild	238	289	7,675	910	1,786	10,898
Grain sorghums	-	-	2,343	4,722	490	8,055
Sweet sorghums	30	244	3,342	2,212	47	5,875
Fruits and nuts	1,827	996	553	372	1,796	5,344
Soybeans for beans	3,168	342	631	85	-	4,226
Rye	621	163	2,807	69	149	3,811
Potatoes	1,263	334	875	149	406	3,027
Commercial truck crops	983	561	262	336	690	2,832
Velvetbeans 2/	-	2,403	-	41	-	2,444
Flaxseed	2	-	2,001	18	263	2,284
Tobacco	192	1,804	18	-	-	2,014
Peanuts picked and threshed	76	1,401	-	382	-	1,859
Beans, dry edible	606	-	260	-	683	1,554
Cowpeas for peas	114	869	22	360	-	1,365
Rice	-	6	-	933	120	1,059
Sweetpotatoes	63	567	19	203	10	862
Sugarbeets	186	-	187	-	443	796
Buckwheat	327	18	34	-	-	379
Sugarcane for sugar	-	35	-	223	-	258
Peas, dry field	7	-	7	-	190	204
Strawberries	60	69	19	20	26	194
Sugarcane for syrup	-	114	-	31	-	145
Cranberries	24	-	3	-	1	28
Total all crops 3/	71,938	52,798	128,369	47,673	28,786	329,814

(Continued)

Table 44.—Acreage of Principal Crops Harvested, by Freight Rate Territories, 1939 1/ (Continued)

(Percent of territory totals)

Crops	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
Corn, all	30.82	41.33	26.61	20.68	2.59	26.93
Tame hay	30.60	15.36	13.35	6.36	27.88	17.69
Wheat, all	11.52	3.15	21.68	14.88	30.52	16.28
Oats	12.06	2.96	14.61	5.58	4.87	10.03
Cotton	.01	17.62	.29	28.19	2.11	7.21
Barley	1.43	.23	6.82	1.20	7.34	3.82
Wild hay	.33	.55	5.98	1.90	6.21	3.30
Grain sorghums	-	-	2.22	9.86	1.70	2.44
Sweet sorghums	.04	.46	2.60	4.62	.16	1.78
Fruits and nuts	2.54	1.89	.28	.78	6.24	1.62
Soybeans for beans	4.40	.65	.49	.18	-	1.28
Rye	.86	.31	2.19	.14	.52	1.16
Potatoes	1.75	.63	.68	.31	1.41	.92
Commercial truck crops	1.37	1.06	.20	.74	2.40	.87
Velvetbeans 2/	-	4.55	-	.09	-	.74
Flaxseed	4/	-	1.56	.04	.91	.69
Tobacco	.27	3.42	.01	-	-	.61
Peanuts picked and threshed	.11	2.65	-	.80	-	.56
Beans, dry edible	.84	-	.20	-	2.39	.47
Cowpeas for peas	.16	1.65	.02	.75	-	.41
Rice	-	.01	-	1.91	.42	.32
Sweetpotatoes	.09	1.07	.01	.42	.04	.26
Sugar beets	.23	-	.15	-	1.54	.24
Buckwheat	.45	.03	.03	-	-	.12
Sugarcane for sugar	-	.07	-	.47	-	.08
Peas, dry field	.01	-	.01	-	.66	.06
Strawberries	.08	.13	.01	.04	.09	.06
Sugarcane for syrup	-	.22	-	.06	-	.04
Cranberries	.03	-	4/	-	4/	.01
All crops 3/	100.00	100.00	100.00	100.00	100.00	100.00

(Continued)

Table 44.—Acreage of Principal Crops Harvested, by Freight Rate Territories, 1939 1/ (Continued)

(Percent of U. S. totals)

Crops	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
Corn, all	24.98	24.57	38.46	11.15	0.84	100.00
Hay, all tame	37.75	13.90	29.37	5.22	13.76	100.00
Wheat, all	15.44	3.10	51.83	13.27	16.36	100.00
Oats	26.26	4.72	56.70	8.08	4.24	100.00
Cotton	.02	39.10	1.59	56.74	2.55	100.00
Barley	8.19	.99	69.50	4.56	16.76	100.00
Hay, wild	2.18	2.65	70.43	8.35	16.39	100.00
Grain sorghums	-	-	35.30	58.62	6.08	100.00
Sweet sorghums	.51	4.15	56.89	37.65	.80	100.00
Fruits and nuts	34.19	18.64	6.60	6.96	33.61	100.00
Soybeans for beans	74.97	8.09	14.93	2.01	-	100.00
Rye	16.29	4.33	73.66	1.81	3.91	100.00
Potatoes	41.73	11.03	28.91	4.92	13.41	100.00
Commercial truck crops	34.46	19.66	9.18	12.50	24.20	100.00
Velvetbeans 2/	-	98.32	-	1.68	-	100.00
Flaxseed	.08	-	87.62	.79	11.51	100.00
Tobacco	9.52	89.57	.01	-	-	100.00
Peanuts picked and threshed	4.09	75.36	-	20.55	-	100.00
Beans, dry edible	39.00	-	16.73	-	44.27	100.00
Cowpeas for peas	8.35	63.66	1.61	26.38	-	100.00
Rice	-	.58	-	87.87	11.55	100.00
Sweetpotatoes	7.31	65.78	2.20	23.55	1.16	100.00
Sugar beets	20.86	-	23.49	-	55.65	100.00
Buckwheat	86.25	4.75	8.97	-	-	100.00
Sugarcane for sugar	-	13.60	-	86.40	-	100.00
Peas, dry field	3.53	..	3.43	-	93.04	100.00
Strawberries	30.81	35.76	9.60	10.24	13.59	100.00
Sugarcane for syrup	-	78.62	-	21.38	-	100.00
Cranberries	85.34	..	10.13	-	4.53	100.00
Total, all crops	21.83	16.01	38.92	14.51	8.73	100.00

1/ Preliminary.
2/ Included in total crop acreage, but largely interplanted in corn.
3/ Omitting alfalfa seed, red clover seed, lespedeza seed, and cottonseed. Also omitting 10,315,000 acres of annual legumes cut for hay, grazed, hogged, or plowed under and an undetermined acreage of farm gardens and other minor crops. The acreages shown include some crops harvested in succession from the same land and a few interplanted items.
4/ Less than .005 percent.

Sources:
U.S.D.A., "Agricultural Statistics," 1940.
U.S.D.A., "Crops and Markets," December 1939.
U.S.D.A., "Farm Production, Farm Disposition, and Value of Principal Field Crops, 1937-1939, by States," April 1940 (mimeographed).
Fifteenth Census of U. S., 1930, Agriculture, Volume II (state and county figures).

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[fol. 5645] Besides these five crops (corn, tame hay, wheat, oats, and cotton), eight other crops (barley, wild hay, grain sorghums, sweet sorghums, fruits and nuts, soybeans for beans, rye, and potatoes) each account for in excess of 3 million acres harvested. The total of these 8 crops for the United States represents a harvested acreage about the same as that represented by wheat. For 4 of these 8 crops Western Trunk Line territory leads all other territories in acreage harvested (barley, wild hay, sweet sorghums, and rye). Official territory outranks all other territories in 3 of these 8 crops in terms of acreage harvested (potatoes, soybeans for beans, and fruits and nuts). Southwestern leads in acreage harvested in the eighth of these crops (grain sorghums). Second position goes to Mountain-Pacific territory in barley, wild hay, and fruits and nuts, and to Western Trunk Line in grain sorghums, soybeans for beans, and potatoes. Hence Western Trunk Line territory ranks either first or second in the acreage harvested for 7 of these 8 crops. Southwestern is second in sweet sorghums and Official territory in rye.

Crop Production

The differences in value of crops harvested by territories (Table 43) are due primarily to differences in the production of the major crops. Table 45 shows the production in physical units of the principal crops in each territory. Obviously, the figures for various crops cannot be added to get territory totals because of the variation in units.

The following tabulation shows the number of crops in the production of which each territory ranks first or second:

Territory	Number of crops	
	Highest production	Second highest production
Official	8	9
Southern	8	6
Western Trunk Line	8	10
Southwestern	6	7
Mountain-Pacific	14	7

(Here follow 2 Photolithographs, side folios 5646-5647)

Table 45. - Production of Principal Crops, by Freight Rate Territories, 1939 1/

Crop	Unit	Territory					United States total
		Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
Corn, all	1,000 bu.	1,038,642	326,447	1,087,483	153,158	13,402	2,619,137
Wheat, all	1,000 bu.	162,783	19,473	321,416	86,478	162,821	754,971
Oats	1,000 bu.	268,251	35,011	532,100	54,301	47,552	937,215
Barley	1,000 bu.	28,426	2,516	179,722	9,003	56,631	276,298
Rye	1,000 bu.	8,130	1,313	27,608	587	1,611	39,249
Buckwheat	1,000 bu.	5,097	223	414	-	-	5,739
Rice	1,000 bu.	-	262	-	43,044	9,000	52,306
Grain sorghums (all purposes)	1,000 bu.	-	-	26,410	48,257	3,435	33,102
Hay, all tame	1,000 sh. tons	26,332	7,519	22,765	3,191	15,419	75,726
Hay, wild	1,000 sh. tons	280	296	5,764	922	1,598	8,300
Sweet sorghums	1,000 sh. tons	74	440	5,651	2,455	46	8,666
Alfalfa seed	1,000 bu.	154	-	448	168	588	1,358
Red clover seed	1,000 bu.	970	9	521	-	214	1,714
Lespedeza seed	1,000 lbs.	17,983	82,710	35,360	2,922	-	138,975
Beans, dry edible	1,000 bags(100 lbs.)	5,769	-	1,385	-	6,808	13,962
Peas, dry field	1,000 bu.	77	-	95	-	3,541	3,713
Soybeans for beans	1,000 bu.	71,193	3,564	11,886	766	-	87,409
Cowpeas for peas	1,000 bu.	1,211	4,704	171	2,430	-	8,516
Peanuts, picked and threshed	1,000 lbs.	89,726	929,276	-	160,303	-	1,179,505
Velvetbeans	1,000 tons	-	834	-	16	-	850
Flaxseed	1,000 bu.	16	-	17,466	207	2,641	20,330
Tobacco	1,000 lbs.	198,273	1,628,203	22,178	-	-	1,848,654
Cotton, lint	1,000 bales 2/	2	5,117	437	5,404	747	11,797
Cottonseed	1,000 sh. tons	1	2,271	194	2,453	332	5,251
Sugarcane for sugar	1,000 sh. tons	-	1,037	-	4,761	-	5,798
Sugarcane for syrup	1,000 gals.	-	17,051	-	7,358	-	24,909
Sugar beets	1,000 sh. tons	1,391	-	2,045	-	6,093	9,529
Potatoes	1,000 bu.	160,645	31,222	30,855	9,767	31,527	364,016
Sweetpotatoes	1,000 bu.	8,492	48,187	1,615	13,135	1,200	72,679
Strawberries	1,000 crates	4,658	4,576	323	1,042	2,525	13,624
Cranberries(5 states)	1,000 bbls.	545	-	103	-	13	671
Apples, total	1,000 bu.	105,316	10,476	8,379	1,448	42,186	168,805
Peaches, total	1,000 bu.	13,879	11,351	1,470	5,569	28,043	60,322
Pears, total	1,000 bu.	6,611	1,936	771	731	20,946	31,047
Grapes, total	Short tons	226,294	19,974	26,117	14,236	2,133,909	2,470,530
Cherries (12 states)	Short tons	86,097	-	8,750	-	92,163	187,010
Plums (2 states)	Short tons	-	-	-	-	77	77
Prunes, used fresh (3 states)	Short tons	-	-	-	-	55	55
Prunes, canned (2 states)	Short tons	-	-	-	-	32	32
Prunes, dried (3 states)	Short tons	-	-	-	-	213	213
Oranges (7 states)	1,000 boxes	-	28,035	-	2,437	45,340	75,362
Grapefruit (4 ")	1,000 boxes	-	15,300	-	13,900	4,375	34,575
Lemons (California)	1,000 boxes	-	-	-	-	12,000	12,000
Pecans (12 states)	1,000 lbs.	160	23,947	500	37,021	-	61,623

(Continued)

Table 45. - Production of Principal Crops, by Freight Rate Territories 1939 1/ (Continued)

Crop	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Percent of U. S. totals)					
Corn, all	39.66	12.46	41.52	5.85	0.51	100.00
Wheat, all	21.56	2.58	42.57	11.72	21.57	100.00
Oats	23.62	3.74	56.78	5.79	5.07	100.00
Barley	10.29	.91	65.05	3.26	20.49	100.00
Rye	20.71	3.35	70.34	1.50	4.10	100.00
Buckwheat	88.81	3.97	7.22	-	-	100.00
Rice	-	.50	-	82.29	17.21	100.00
Grain sorghums (all purposes)	-	-	31.78	58.07	10.15	100.00
Hay, all tame	35.43	9.93	30.06	4.22	20.36	100.00
Hay, wild	2.50	3.36	65.50	10.48	18.16	100.00
Sweet sorghums	.35	5.08	65.21	28.33	.53	100.00
Alfalfa seed	11.34	-	32.99	12.37	43.30	100.00
Red clover seed	56.59	.52	30.40	-	12.49	100.00
Lespedeza seed	12.94	59.52	25.44	2.10	-	100.00
Beans, dry edible	41.32	-	9.92	-	43.76	100.00
Peas, dry field	2.07	-	2.56	-	95.37	100.00
Soybeans for beans	81.45	4.08	13.59	.88	-	100.00
Cowpeas for peas	14.22	55.24	2.01	28.53	-	100.00
Peanuts, picked and threshed	7.61	78.78	-	13.61	-	100.00
Velvetbeans	-	98.12	-	1.88	-	100.00
Flaxseed	.08	-	35.01	2.02	12.99	100.00
Tobacco	10.72	83.08	1.20	-	-	100.00
Cotton, lint	.02	43.33	3.70	46.57	6.33	100.00
Cottonseed	.02	43.35	3.69	46.72	6.32	100.00
Sugarcane for sugar	-	17.89	-	82.11	-	100.00
Sugarcane for syrup	-	68.45	-	31.55	-	100.00
Sugar beets	14.60	-	21.46	-	63.94	100.00
Potatoes	44.13	3.53	22.21	2.63	27.40	100.00
Sweetpotatoes	11.69	66.90	2.22	18.14	1.55	100.00
Strawberries	34.19	33.59	6.04	7.65	18.53	100.00
Cranberries (5 states)	81.22	-	16.10	-	2.68	100.00
Apples, total	62.69	6.20	5.06	.86	24.99	100.00
Peaches, total	22.42	19.43	2.43	9.16	46.11	100.00
Pears, total	21.29	6.24	2.48	2.52	67.47	100.00
Grapes, total	9.16	.81	1.05	.58	88.40	100.00
Cherries (12 states)	46.04	-	4.68	-	49.28	100.00
Plums (2 states)	-	-	-	-	100.00	100.00
Prunes, used fresh (3 states)	-	-	-	-	100.00	100.00
Prunes, canned (2 states)	-	-	-	-	100.00	100.00
Prunes, dried (3 states)	-	-	-	-	100.00	100.00
Oranges (7 states)	-	37.02	-	3.21	59.77	100.00
Grapefruit (4 states)	-	45.70	-	40.20	14.10	100.00
Lemons (California)	-	-	-	-	100.00	100.00
Pecans (12 states)	.26	33.86	.31	60.07	-	100.00

1/ Preliminary.
2/ 500 lbs. gross weight.

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Sources:
U.S.D.A., "Agricultural Statistics," 1940.
U.S.D.A., "Crops and Markets," December 1939.
Fifteenth Census of U. S., 1930, Agriculture, Volume II (state and county figures).

[fol. 5648] This tabulation over-emphasizes the position of Mountain-Pacific territory because of the large number of fruit and nut crops included in the table. When the crops are considered from the standpoint of national importance, a somewhat different picture is presented. For example, Western Trunk Line territory ranks first in the production of corn, wheat, and oats, three of the five most important crops from the standpoint of acreage, and second in the production of hay. In the production of the other two crops with a harvested acreage greater than 20 million acres, Southwestern territory ranks first in cotton, and Official territory ranks first in hay and second in corn and oats production. Southern territory ranks second in the production of cotton and Mountain-Pacific territory ranks second in the production of wheat.

In the following tabulation are shown the number of the ten most important crops from the standpoint of acreage (disregarding fruits and nuts) in which each territory ranks first or second.

Territory	Number of crops	
	Highest production	Second highest production
Official	2	2
Southern	0	1
Western Trunk Line	6	3
Southwestern	2	1
Mountain-Pacific	0	3

This tabulation indicates the outstanding position of Western Trunk Line territory in the production of the large acreage crops, ranking either first or second in 9 out of the 10 crops having the largest acreage.

Yield Per Acre by Crops

The value of production of principal crops depends upon the yield per acre as well as the acreage harvested. Table 46, which gives the yield per acre for each crop in each of the freight rate territories and for the United States as a whole in 1939, shows that except for sweet sorghums and corn the yield per acre in the Mountain-Pacific division

(Here follows 1 photolithograph, side folio 5649)

Table 46.--Average Yield Per Acre of 30 Principal Crops, by Freight Rate Territories, 1939 1/

Crop	Unit	Territory					United States average
		Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
Corn	Bu.	46.8	15.0	31.8	15.5	18.0	29.5
Wheat	Bu.	19.6	11.7	11.5	12.4	18.5	14.1
Oats	Bu.	30.9	22.4	28.4	20.3	33.9	28.3
Barley	Bu.	27.5	20.3	20.5	15.7	26.8	21.9
Rye	Bu.	13.1	8.0	9.8	8.5	10.8	10.3
Buckwheat	Bu.	15.6	12.7	12.2	-	-	15.1
Rice	Bu.	-	43.0	-	47.1	75.0	50.3
Grain sorghums	Bu.	-	-	9.3	10.2	17.2	10.3
Hay, tame	Sh.tons	1.22	.93	1.33	1.05	1.92	1.30
Hay, wild	Sh.tons	.92	1.02	.75	1.01	.89	.81
Sweet sorghums	Sh.tons	2.47	1.80	1.69	1.11	.98	1.48
Alfalfa seed	Bu.	1.00	-	1.25	2.59	2.45	1.66
Red clover seed	Bu.	1.10	1.50	1.20	-	3.60	1.25
Lespedeza seed	Lb.	205.5	195.5	221.0	167.2	-	202.0
Beans, dry edible	Lb.	952.0	-	532.7	-	989.5	898.5
Peas, dry field	Bu.	10.7	-	13.6	-	18.7	18.2
Soybeans for beans	Bu.	22.5	10.4	18.8	9.0	-	20.7
Cowpeas for peas	Bu.	10.6	5.4	7.8	6.8	-	6.2
Peanuts, picked and threshed	Lb.	1,181	663	-	420	-	634.5
Velvetbeans	Lb.	-	694	-	780	-	695.6
Flaxseed	Bu.	8.9	-	8.7	11.5	10.0	8.9
Tobacco	Lb.	1,034	902	1,204	-	-	918
Cotton, lint	Net lbs.	191	264	555	195	587	238
Cottonseed	Lb.	375	488	1,029	364	1,092	442
Sugarcane for sugar	Sh.tons	-	29.5	-	21.4	-	22.5
Sugarcane for syrup	Gal.	-	150	-	253	-	171.8
Sugar beets	Sh.tons	8.4	-	10.9	-	13.8	11.7
Potatoes	Bu.	127.2	93.5	92.4	65.6	200.9	120.3
Sweet potatoes	Bu.	135	85	85	85	120	84
Strawberries	Crates	77.8	65.8	44.1	52.3	95.6	70.1

1/ Preliminary.

Sources:
U.S.D.A., "Agricultural Statistics," 1940.
U.S.D.A., "Crops and Markets," December 1939.
Fifteenth Census of U. S., 1930, Agriculture, Volume II (state and county figures).

[fol. 5650] exceeds the United States average for every one of the 21 crops produced in that area. Moreover, the yield per acre for 13 out of the 21 crops in this territory, for which comparisons are possible, or about 60 percent of them, is higher than in any other rate territory. This is presumably related to the extensive acreage under irrigation. Official territory is the only other area in which the yield per acre for a majority of its crops is above average. In this territory 17 out of the 25 crops for which average yield per acre is available show a higher than average productivity, including 3 (wheat, corn, and oats) of the 5 crops heretofore referred to as representing 78 percent of the acreage harvested and over 63 percent of the farm income. In tame hay and cotton, the other two of the 5 principal crops, its yield is below average although the acreage of cotton in Official territory is insignificant in any case. In all 6 of the crops in the 3 million to 20 million acre grouping, for which comparisons are possible, Official territory also shows a higher than average yield per acre. In the case of sweet sorghums and wild hay, however, the acreage involved is insignificant. One of these 8 crops, grain sorghums is not grown in Official territory and another, fruits and nuts, cannot be compared because no yield per acre is available. Each of the other 3 territories shows a lower than average productivity for a majority of the crops grown. Of these three, Western Trunk Line territory makes the best showing with a yield per acre higher than average for 10 crops and a below average yield for 15. Southwestern territory, however, shows a yield which is below average for 18 crops and above average for only 6. Southern territory, making an average showing somewhat better in 1939 than Southwestern territory, reported below average yields in 16 crops as compared with above average in 8.

Of the 5 major crops which bulk so extensively in the agricultural economy, Western Trunk Line is above average in corn, cotton, the acreage of which, however, is insignificant, tame hay, and oats, though the margin in both the latter crops is so narrow that the territory might more properly perhaps be regarded as average. Southern terri- [fol. 5651] tory shows a yield per acre above average for only cotton among the 5 crops showing an acreage harvested in excess of 20 million acres, and Southwestern terri-

tory is below average in the yield per acre for all 5 major crops.

A somewhat similar situation is found with regard to crops other than these 5. For the group showing from 3 million to 20 million acres harvested in 1939, Western Trunk Line territory is above average only in sweet sorghums, Southern in only sweet sorghums and wild hay, and Southwestern only in wild hay.

Farm Value of Individual Crops

Table 47 shows the territorial distribution of the farm value of crops harvested in 1939. The crops are arranged in order of national importance, and it is interesting to note the effect which a relatively few crops have on the national total value produced. For example, corn alone accounted for 27 percent of the total value and the four major crops, each having a value greater than ½ billion dollars (corn, tame hay, cotton, and wheat) accounted together for 60 percent. The 10 major crops,[1] each with a value greater than $100,000,000 accounted for 85 percent of the national total.

Of these 10 major crops, Official territory ranks first in the value of 3 (tame hay, potatoes, and apples) and second in the value of 5 (corn, wheat, tobacco, oats, and truck crops). Southern territory ranks first in the value of one (tobacco) and second in one (cotton). Western Trunk Line territory produces the highest farm value of 4 (corn, wheat, oats, and barley) and stands in second place in the value of 2 (tame hay and potatoes). Southwestern territory ranks highest in the value of one (cotton) and is second in none, and Mountain-Pacific territory ranks first in one (truck crops) and second in 2 (apples and barley). The dominance of Official and Western Trunk Line territories in the farm

[1] Cotton lint and cottonseed considered as one crop.

(Here follow 3 Photolithographs, side folios 5652-5654)

Table 47.—Farm Value of Principal Crops, by Freight Rate Territories, 1939 1/

Crops	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Thousand dollars)					
Corn, all	562,698	226,283	574,037	91,710	9,611	1,464,339
Hay, all tame	242,592	79,839	130,997	26,421	121,233	601,082
Cotton, lint	81	238,425	19,468	240,722	37,300	535,996
Wheat, all	121,158	16,495	214,354	55,177	103,490	510,674
Tobacco	36,802	245,826	2,729	-	-	285,357
Oats	86,433	14,765	143,349	16,387	15,975	276,909
Commercial truck crops	75,901	50,203	13,120	16,242	101,407	256,873
Potatoes	127,171	23,894	45,909	8,348	43,859	249,181
Apples	68,730	7,543	6,659	1,100	27,843	111,925
Barley	14,231	1,462	69,037	3,510	23,462	111,702
Cottonseed	18	49,238	3,785	49,474	8,552	111,067
Oranges	-	24,957	-	2,723	56,253	83,933
Soybeans for beans	53,642	3,378	9,091	378	-	67,489
Sweetpotatoes	6,111	35,855	1,276	10,093	1,080	54,415
Peaches, total	12,918	14,377	1,504	5,012	15,141	48,952
Sugar beets	8,247	-	9,990	-	30,176	48,413
Grain sorghums (all purposes)	-	-	14,488	22,952	5,024	46,464
Beans, dry edible	16,656	-	4,871	-	24,502	46,049
Sweet sorghums	390	2,333	29,952	13,013	244	45,932
Hay, wild	1,441	2,245	21,206	5,799	9,918	40,609
Grapes, total	7,454	1,276	1,008	543	30,156	40,437
Rice	-	204	-	34,100	6,120	40,424
Peanuts, picked and threshed	3,230	31,470	-	5,295	-	39,995
Strawberries	9,254	13,075	1,852	2,551	5,840	32,552
Flaxseed	24	-	27,028	342	4,155	31,549
Pears, total	4,350	1,356	489	561	12,359	19,115
Lemons (California)	-	-	-	-	18,000	18,000
Sugarcane for sugar	-	3,153	-	13,331	-	16,484
Rye	4,187	1,146	9,653	270	774	16,030
Grapefruit (4 states)	-	8,374	-	5,282	2,206	15,862
Red clover seed	8,773	93	4,753	-	1,824	15,443
Prunes, dried (3 states)	-	-	-	-	14,048	14,048
Alfalfa seed	1,681	-	4,992	1,397	5,740	13,810
Cowpeas for peas	1,439	7,247	217	3,481	-	12,384
Velvetbeans	-	10,763	-	261	-	11,024
Cherries (12 states)	4,063	-	434	-	6,204	10,701
Sugarcane for syrup	-	7,873	-	2,825	-	10,698
Cranberries (5 states)	5,578	-	1,145	-	186	6,909
Lespedeza seed	758	3,990	1,445	141	-	6,334
Pecans (12 states)	15	2,608	42	3,141	-	5,806
Peas, dry field	115	-	135	-	5,307	5,557
Buckwheat	3,247	167	233	-	-	3,647
Plums (2 states)	-	-	-	-	2,439	2,439
Prunes, used fresh (3 states)	-	-	-	-	690	690
Prunes, canned (2 states)	-	-	-	-	269	269
Total, all crops	1,489,458	1,130,413	1,369,188	649,082	751,367	5,389,508

(Continued)

Table 47.--Farm Value of Principal Crops, by Freight Rate Territories, 1939 1/ (Continued)

Crops	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Percent of territory totals)					
Corn, all	37.78	20.02	41.93	14.13	1.28	27.17
[illegible], all tame	16.29	7.06	9.57	4.07	16.13	11.15
Cotton, lint	.01	21.09	1.42	37.09	4.96	9.94
[illegible], all	8.13	1.48	15.66	8.50	13.77	9.48
Tobacco	2.47	21.75	.20	-	-	5.29
[illegible]	5.80	1.31	10.47	2.52	2.13	5.14
Commercial truck crops	5.10	4.44	.96	2.50	13.50	4.77
[illegible]toes	8.54	2.11	3.35	1.29	5.84	4.62
[illegible]les	4.62	.87	.49	.17	3.71	2.08
[illegible]ley	.95	.13	5.04	.54	3.12	2.07
Cottonseed	2/	4.36	.28	7.62	1.14	2.06
Oranges	-	2.21	-	.42	7.49	1.56
[illegible]eans for beans	3.60	.34	.66	.14	-	1.25
[illegible]etpotatoes	.41	3.17	.09	1.56	.14	1.01
[illegible]ches, total	.87	1.27	.11	.77	2.02	.91
[illegible]r beets	.55	-	.73	-	4.02	.90
[illegible]n sorghums	-	-	1.05	4.46	.67	.90
[illegible]s, dry edible	1.12	-	.36	-	3.26	.85
[illegible]t sorghums	.03	.21	2.19	2.01	.03	.85
[illegible], wild	.10	.20	1.55	.89	1.32	.75
[illegible]es, total	.50	.11	.07	.08	4.01	.75
[illegible]	-	.02	-	5.25	.81	.75
[illegible]nts, picked and threshed	.22	2.70	-	.82	-	.74
[illegible]wberries	.62	1.16	.13	.39	.78	.60
[illegible]xseed	2/	-	1.97	.05	.55	.59
[illegible]s, total	.29	.12	.04	.09	1.65	.35
[illegible]ns (California)	-	-	-	-	2.40	.33
[illegible]rcane for sugar	-	.28	-	2.05	-	.31
[illegible]	.28	.10	.70	.04	.10	.30
[illegible]efrift (4 states)	-	.74	-	.81	.29	.29
[illegible] clover seed	.59	.01	.35	-	.24	.29
[illegible]es, dried (3 states)	-	-	-	-	1.87	.26
[illegible]lfa seed	.11	-	.36	.22	.76	.26
[illegible]eas for peas	.10	.64	.02	.54	-	.23
[illegible]vetbeans	-	.95	-	.04	-	.20
[illegible]rries (14 states)	.27	-	.03	-	.83	.20
[illegible]rcane for syrup	-	.70	-	.44	-	.20
[illegible]berries (5 states)	.37	-	.08	-	.02	.13
[illegible]edeza seed	.05	.35	.11	.02	-	.12
[illegible]ns (12 states)	2/	.23	2/	.48	-	.11
[illegible], dry field	.01	-	.01	-	.71	.10
[illegible]wheat	.22	.01	.02	-	-	.07
[illegible]s (2 states)	-	-	-	-	.32	.05
[illegible]es, used fresh (3 states)	-	-	-	-	.09	.01
[illegible]es, canned (2 states)	-	-	-	-	.04	.01
Total all crops	100.00	100.00	100.00	100.00	100.00	100.00

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(Continued)

Table 47.--Farm Value of Principal Crops, by Freight Rate Territories, 1939 1/ (Continued)

Crops	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Percent of territory totals)					
Corn, all	37.78	20.02	41.93	14.13	1.28	27.17
Hay, all tame	16.29	7.06	9.57	4.07	16.13	11.15
Cotton, lint	.01	21.09	1.42	37.09	4.96	9.94
Wheat, all	8.13	1.46	15.66	6.50	13.77	9.48
Tobacco	2.47	21.75	.20	-	-	5.29
Oats	5.80	1.31	10.47	2.52	2.13	5.14
Commercial truck crops	5.10	4.44	.96	2.50	13.50	4.77
Potatoes	8.54	2.11	3.35	1.29	5.84	4.62
Apples	4.62	.67	.49	.17	3.71	2.08
Barley	.95	.13	5.04	.54	3.12	2.07
Cottonseed	2/	4.36	.28	7.62	1.14	2.06
Oranges	-	2.21	-	.42	7.49	1.56
Soybeans for beans	3.60	.34	.66	.14	-	1.25
Sweetpotatoes	.41	3.17	.09	1.56	.14	1.01
Peaches, total	.87	1.27	.11	.77	2.02	.91
Sugar beets	.55	-	.73	-	4.02	.90
Grain sorghums	-	-	1.05	4.46	.67	.90
Beans, dry edible	1.12	-	.36	-	3.26	.85
Sweet sorghums	.03	.21	2.19	2.01	.03	.85
Hay, wild	.10	.20	1.55	.89	1.32	.75
Grapes, total	.50	.11	.07	.08	4.01	.75
Rice	-	.02	-	5.25	.81	.75
Peanuts, picked and threshed	.22	2.78	-	.82	-	.74
Strawberries	.62	1.16	.13	.39	.78	.60
Flaxseed	2/	-	1.97	.05	.55	.59
Pears, total	.29	.12	.04	.09	1.65	.35
Lemons (California)	-	-	-	-	2.40	.33
Sugarcane for sugar	-	.28	-	2.05	-	.31
Rye	.28	.10	.70	.04	.10	.30
Grapefruit (4 states)	-	.74	-	.81	.29	.29
Red clover seed	.59	.01	.35	-	.24	.29
Prunes, dried (3 states)	-	-	-	-	1.87	.26
Alfalfa seed	.11	-	.36	.22	.76	.26
Cowpeas for peas	.10	.64	.02	.54	-	.23
Velvetbeans	-	.95	-	.04	-	.20
Cherries (12 states)	.27	-	.03	-	.83	.20
Sugarcane for syrup	-	.70	-	.44	-	.20
Cranberries (5 states)	.37	-	.08	-	.02	.13
Lespedeza seed	.05	.35	.11	.02	-	.12
Pecans (12 states)	2/	.23	2/	.48	-	.11
Peas, dry field	.01	-	.01	-	.71	.10
Buckwheat	.22	.01	.02	-	-	.07
Plums (2 states)	-	-	-	-	.32	.05
Prunes, used fresh (3 states)	-	-	-	-	.09	.01
Prunes, canned (2 states)	-	-	-	-	.04	.01
Total all crops	100.00	100.00	100.00	100.00	100.00	100.00

(Continued)

Table 47.--Farm Value of Principal Crops, by Freight Rate Territories, 1939 1/ (Continued)

Crops	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Percent of U.S. totals)					
Corn, all	38.43	15.45	39.20	6.26	0.66	100.00
Hay, all tame	40.36	13.28	21.79	4.40	20.17	100.00
Cotton, lint	.02	44.48	3.63	44.91	6.96	100.00
Wheat, all	23.73	3.23	41.97	10.80	20.27	100.00
Tobacco	12.90	86.15	.95	-	-	100.00
Oats	31.21	5.33	51.77	5.92	5.77	100.00
Commercial truck crops	[illegible].55	19.54	5.11	6.32	39.48	100.00
Potatoes	[illegible].04	9.59	18.42	3.35	17.50	100.00
Apples	61.45	6.74	5.95	.98	24.88	100.00
Barley	12.74	1.31	61.81	3.14	21.00	100.00
Cottonseed	.02	44.33	3.41	44.54	7.70	100.00
Oranges	-	29.74	-	3.24	67.02	100.00
Soybeans for beans	79.48	5.75	13.47	1.30	-	100.00
Sweetpotatoes	11.23	65.89	2.34	18.55	1.99	100.00
Peaches, total	26.39	29.37	3.07	10.24	30.93	100.00
Sugar beets	7.03	-	20.64	-	62.33	100.00
Grain sorghums (all purposes)	-	-	29.81	59.81	10.38	100.00
Beans, dry edible	36.17	-	10.62	-	53.21	100.00
Sweet sorghums	.85	5.08	65.21	28.33	.53	100.00
Hay, wild	3.55	5.53	52.22	14.28	24.42	100.00
Grapes, total	18.43	3.15	2.49	1.34	74.58	100.00
Rice	-	.50	-	84.36	15.14	100.00
Peanuts, picked and threshed	8.08	78.68	-	13.24	-	100.00
Strawberries	28.43	40.17	5.63	7.83	17.94	100.00
Flaxseed	.07	-	85.67	1.09	13.17	100.00
Pears, total	22.76	7.09	2.56	2.93	64.66	100.00
Lemons (California)	-	-	-	-	100.00	100.00
Sugarcane for sugar	-	19.13	-	80.87	-	100.00
Rye	26.12	7.15	60.22	1.68	4.83	100.00
Grapefruit (4 states)	-	52.79	-	33.30	13.91	100.00
Red clover seed	56.81	.60	30.78	-	11.81	100.00
Prunes, dried (3 states)	-	-	-	-	100.00	100.00
Alfalfa seed	12.17	-	36.15	10.12	41.56	100.00
Cowpeas for peas	11.62	58.52	1.75	28.11	-	100.00
Velvetbeans	-	97.63	-	2.37	-	100.00
Cherries (12 states)	37.97	-	4.06	-	57.97	100.00
Sugarcane for syrup	-	73.59	-	26.41	-	100.00
Cranberries (5 states)	80.74	-	16.57	-	2.69	100.00
Lespedeza seed	11.97	62.99	22.81	2.23	-	100.00
Pecans (12 states)	.25	44.92	.72	54.11	-	100.00
Peas, dry field	2.07	-	2.43	-	95.50	100.00
Buckwheat	89.03	4.58	6.39	-	-	100.00
Plums (2 states)	-	-	-	-	100.00	100.00
Prunes, used fresh (3 states)	-	-	-	-	100.00	100.00
Prunes, canned (2 states)	-	-	-	-	100.00	100.00
Total, all crops	27.64	20.97	25.41	12.04	13.94	100.00

1/ Preliminary.
2/ Less than .005 percent.
Sources:
U.S. D.A., "Agricultural Statistics," 1940.
U.S. D.A., "Crops and Markets," December 1939.
U.S. D.A., "Farm Production, Farm Disposition, and Value of Principal Field Crops, 1937-1939, by States," April 1940 (mimeographed).
Fifteenth Census of U.S., 1930, Agriculture, Volume II (state and county figures).

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[fol. 5655] value of the major crops is clearly demonstrated by this table. The relatively high standing of Southern territory (1.1 billion dollars, or 21 percent of the national total) is due to its high production of some of the less important crops and more particularly to its high production of tobacco and cotton.

Average Farm Price Per Acre of Individual Crops

Table 43 shows that although acreage harvested in Southern territory was nearly 27 percent below that in Official classification territory and much less than half that of the Western Trunk Line area, the total crop value produced in that territory is only 24 percent below that of Official territory and only 17 percent below that of Western Trunk Line territory. The same table shows that the value produced per acre in Southern territory is appreciably higher than that of Official territory and about twice that of Western Trunk Line area. An examination of Table 48, which presents the average farm prices for the principal crops of 1939,[1] indicates that this high value of total production and high value produced per acre is the result of the generally higher average farm prices prevailing in Southern territory as compared with the other freight rate territories. Of the 30 crops shown in this table for which comparison can be made, there were only 4 (velvet-beans, tobacco, oranges, and sweetpotatoes) for which the average farm price was not higher than the United States average. Not only is this true, but for a majority (17 out of 30) of these crops the farm price in 1939 was higher than the farm price in any other of the 5 freight rate territories. In contrast, the Western Trunk Line area shows a situation approximating the opposite of that in Southern territory. In this rate area there are only 9 of the principal crops (alfalfa seed, red clover seed, dry edible beans, sweetpotatoes, cranberries, apples, peaches, pears, and grapes), none of which are of first importance, that showed a price higher

[1] It should be noted that the crops listed in this table include some fruit and nut crops not listed in Table 46.

(Here follows 1 Photolithograph, side folio 5656)

Table 48.--Average Farm Prices of 38 Principal Crops, by Freight Rate Territories, 1939 1/

Crop	Unit	Territory					United States average
		Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
Corn	¢ per bu.	54	69	53	60	72	56
Wheat	¢ per bu.	74	85	67	62	64	68
Oats	¢ per bu.	32.2	42.2	26.9	30.2	33.6	29.5
Barley	¢ per bu.	50	58	38	39	41	40.4
Rye	¢ per bu.	51.5	87.3	35.0	46.0	48.0	40.8
Buckwheat	¢ per bu.	63.7	73.2	56.3	-	-	63.5
Rice	¢ per bu.	-	77.8	-	79.2	68.0	77.3
Grain sorghums	¢ per bu.	-	-	55	60	60	58
Hay, tame	$ per ton	9.04	10.62	5.75	8.28	7.86	7.94
Hay, wild	$ per ton	6.55	7.58	3.68	6.29	6.21	4.61
Alfalfa seed	$ per bu.	10.89	-	11.15	8.34	9.75	10.17
Red clover seed	$ per bu.	9.04	10.02	9.12	-	8.55	9.01
Lespedeza seed	$ per cwt.	4.22	4.83	4.09	4.81	-	4.56
Beans, dry edible	$ per cwt.	2.89	-	3.53	-	3.60	3.29
Peas, dry field	$ per bu.	1.49	-	1.42	-	1.50	1.50
Soybeans for beans	$ per bu.	.75	1.09	.76	1.15	-	.77
Cowpeas for peas	$ per bu.	1.19	1.54	1.27	1.43	-	1.45
Peanuts, picked and threshed	¢ per lb.	3.60	3.40	-	3.30	-	3.39
Velvetbeans	$ per ton	-	12.91	-	16.31	-	12.97
Flaxseed	$ per bu.	1.50	-	1.55	1.65	1.57	1.55
Tobacco	¢ per lb.	18.56	15.10	12.30	-	-	15.40
Cotton, lint	¢ per gross lb.	9.29	9.32	8.91	8.76	9.99	9.09
Cottonseed	$ per ton	18.00	21.68	19.51	20.17	25.76	21.15
Sugarcane for sugar	$ per ton	-	3.04	-	2.80	-	2.84
Sugarcane for syrup	$ per gal.	-	.46	-	.36	-	.43
Sugar beets	$ per ton	5.93	-	4.89	-	4.95	5.08
Potatoes	¢ per bu.	79.2	76.5	56.8	85.5	53.8	68.7
Sweet potatoes	¢ per bu.	71.9	74.4	79.0	76.5	90.0	74.9
Strawberries	$ per crate	1.99	2.86	2.23	2.45	2.31	2.39
Cranberries	$ per bbl.	10.24	-	10.60	-	10.33	10.30
Apples	$ per bu.	.65	.72	.75	.76	.66	.66
Peaches	$ per bu.	.93	1.21	1.02	.90	.54	.80
Pears	$ per bu.	.66	.70	.63	.72	.59	.62
Cherries	$ per ton	47.19	-	49.64	-	67.32	57.22
Grapes	$ per ton	32.94	63.88	38.60	38.14	13.81	16.36
Pecans	¢ per lb.	9.10	10.90	8.40	8.50	-	9.40
Oranges	$ per box	-	.89	-	1.12	1.24	1.11
Grapefruit	$ per box	-	.53	-	.38	.45	.46

1/ Preliminary.

Sources:
U.S.D.A., "Agricultural Statistics," 1940.
U.S.D.A., "Crops and Markets," December 1939.
Fifteenth Census of U. S., 1930, Agriculture, Volume II (state and county figures).

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[fol. 5657] than the average for the United States. In addition, 13 of the 31 crops for which comparisons are possible showed prices lower than those of any other freight rate territory, including corn, oats, and tame hay, which as heretofore stated, are 3 of the 5 crops representing an acreage harvested in excess of 20 million acres each.

In the other three territories the differences in price per unit are not so pronounced, and in all three a majority of the crops showed a farm price higher than the United States average. In Official territory 17 crops showed a price above average while 14 were below. The former group, moreover, included wheat, oats, and tame hay, or 3 out of the 5 crops with a harvested acreage of over 20 million acres for the United States. All three of these crops are very important in this territory. Southwestern territory shows 19 crops above average in price and 11 below, while the Mountain-Pacific showed 14 above and 12 below average. In view of this showing the explanation of the much higher dollar yield per acre ($26.10) in the latter territory as compared with other freight rate areas (Table 43) must be found partly in the fact that this territory shows a much higher productivity in terms of the quantity produced per acre as was indicated in a preceding subsection discussing Table 46. The explanation is also partly to be found in the fact that Mountain-Pacific territory produces such a high proportion of fruits and nuts which have a high dollar yield per acre. Thus, the fruits and nuts studied in this report made up only slightly over 6 percent of the total acreage harvested in Mountain-Pacific territory, yet they accounted for 25.5 percent of the farm value produced in that territory.

[fol. 5658] *Agricultural Resources as Measured by 1939 Livestock and Poultry Production*

Production of Livestock and Poultry Products

Data on production and value of livestock and poultry and their products were taken from figures released by the U. S. Department of Agriculture. Figures for states which are divided by freight rate territory boundaries were apportioned to territories on the basis of Census county figures as of the Census of 1930. Inventories of livestock and poultry were used as the basis for apportionment, except that milk production in 1929 was used to allocate milk production and value in 1939.

Table 49 illustrates the dominant position of Official and Western Trunk Line territories in the production of livestock and poultry. Official territory ranks first in the production of milk, chickens, and eggs, and second in the production of cattle and hogs. Western Trunk Line territory ranks first in the production of cattle, hogs, and turkeys and second in the production of sheep, milk, chickens, and eggs. Southwestern territory shows the highest production of mohair (relatively unimportant) and the second highest production of wool. Mountain-Pacific territory ranks first in the production of sheep and wool and second in the production of mohair and turkeys. Southern territory ranks neither first nor second in the production of any of these commodities. Further discussion of the distribution of livestock and poultry production appears later in this report.

(Here follows 1 Photolithograph, side folio 5659)

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Table 49. - Livestock and Poultry. Production on Farms, by Freight Rate Territories, 1939 1/

Item	Unit	Territory					United States total.
		Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
Cattle and calves.....	1000 lbs.2/	3,264,218	1,201,835	5,909,803	2,323,770	2,255,859	14,955,485
Sheep and lambs.....	1000 lbs.2/	325,373	103,175	546,425	232,021	963,600	2,170,599
Hogs	1000 lbs.2/	4,983,741	2,143,062	7,967,692	1,332,633	553,439	16,980,567
Milk and milk products	Million lbs.	39,273	10,656	38,819	8,549	11,261	108,558
Wool	1000 lbs.	47,405	9,009	57,932	80,375	182,676	377,397
Mohair	1000 lbs.	-	-	198	15,960	2,551	18,709
Chickens	Thousands	242,917	121,267	206,294	73,918	49,659	694,275
Chicken eggs	Millions	14,475	4,551	11,463	3,927	3,799	38,225
Turkeys	Thousands	6,498	2,089	10,856	5,510	7,412	32,365
		Percent of U. S. totals					
Cattle and calves		21.83	8.04	39.51	15.54	15.08	100.00
Sheep and lambs		14.99	4.75	25.17	10.69	44.40	100.00
Hogs		29.35	12.62	46.92	7.85	3.26	100.00
Milk and milk products		36.18	9.82	35.75	7.87	10.37	100.00
Wool		12.56	2.39	15.35	21.30	48.40	100.00
Mohair		-	-	1.06	85.31	13.63	100.00
Chickens		34.99	17.47	29.71	10.65	7.18	100.00
Chicken eggs		37.87	11.93	29.99	10.27	9.94	100.00
Turkeys		20.08	6.45	33.54	17.03	22.90	100.00

1/ Preliminary.
2/ Live weight. Slaughter, plus shipments out, minus shipments in, plus or minus changes in inventory.

Source: U.S.D.A., Agricultural Marketing Service, "Farm Production and Value of Livestock and Livestock Products, 1938-1939, by States," July 1940. Special release (processed).

[fol. 5660] *Value of Livestock and Poultry Products*

Table 50 shows that the livestock and poultry studied in this report [1] acounted for over 5 billion dollars of farm value produced in 1939. The largest single item is milk [2] which accounts for 34 percent of the total and cattle, hogs, and milk together acount for 76 percent.

The first and second rankings of the territories in terms of value produced are identical with the rankings of physical production discussed previously. In the total value produced by all the commodities Official teritory ranks first with 34.71 percent, closely followed by Western Trunk Line with 32.70 percent of the national total. Southern and Mountain-Pacific territories each produced about 11 percent and Southwestern territory falls in last position with 9.73 percent of the United States total.

Average Farm Value Per Unit

Average farm values by rate teritories were found by dividing total farm value by the total number of units produced. They do not represent average farm prices in all cases because in some instances there is no one unit of measurement in selling the commodity. For example, milk may be sold by the quart, or as cream, or even as butter.

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[1] Does not include all livestock and poultry, since horses, mules, ducks, geese, and some others are not included.

[2] Gross income from milk is used in place of farm value to avoid duplication of the value of milk fed to calves. Also gross income of eggs is used to avoid duplication of the value of eggs used for hatching.

(Here follows 2 Photolithographs, side folios 5661-5662)

Table 50. - Livestock and Poultry. Value of Production on Farms, by Freight Rate Territories, 1939 1/

Item	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(1,000 dollars)					
Cattle and calves	249,671	71,873	450,515	146,924	156,870	1,075,853
Sheep and lambs	23,256	8,292	39,933	12,521	64,877	148,879
Hogs	328,609	133,492	479,736	79,172	37,567	1,058,576
Milk and milk products 2/	744,203	223,767	428,772	142,099	184,643	1,723,484
Wool	11,358	2,218	12,024	19,089	39,635	84,324
Mohair	-	-	55	7,820	971	8,846
Chickens	149,579	58,938	93,482	29,790	23,267	355,056
Chicken eggs 3/	234,512	64,853	130,159	46,331	63,829	539,684
Turkeys	19,275	5,306	23,817	9,750	19,603	77,751
Total	1,760,463	568,739	1,658,493	493,496	591,262	5,072,453
	Percent of territory totals					
Cattle and calves	14.18	12.64	27.16	29.77	26.53	21.21
Sheep and lambs	1.32	1.46	2.41	2.54	10.97	2.94
Hogs	18.67	23.47	28.93	16.04	6.35	20.87
Milk and milk products 2/	42.27	39.35	25.85	28.79	31.23	33.98
Wool	0.65	0.39	0.72	3.87	6.70	1.65
Mohair	-	-	4/	1.58	0.16	0.17
Chickens	8.50	10.36	5.64	6.04	3.94	7.00
Chicken eggs 3/	13.32	11.40	7.85	9.39	10.80	10.64
Turkeys	1.09	.93	1.44	1.98	3.32	1.53
Total	100.00	100.00	100.00	100.00	100.00	100.00
	Percent of U. S. totals					
Cattle and calves	23.21	6.68	41.87	13.66	14.58	100.00
Sheep and lambs	15.62	5.57	26.82	8.41	43.58	100.00
Hogs	31.04	12.61	45.32	7.48	3.55	100.00
Milk and milk products 2/	43.18	12.98	24.88	8.25	10.71	100.00
Wool	13.47	2.63	14.26	22.64	47.00	100.00
Mohair	-	-	0.62	88.40	10.98	100.00
Chickens	42.13	16.60	26.33	8.39	6.55	100.00
Chicken eggs 3/	43.45	12.02	24.12	8.58	11.83	100.00
Turkeys	24.79	6.83	30.63	12.54	25.21	100.00
Total	34.71	11.21	32.70	9.73	11.65	100.00

1/ Preliminary.
2/ Gross income, excluding from total value of production the value of milk fed to calves.
3/ Gross income, excluding from total value of production the value of eggs used for hatching.
4/ Less than .005 percent.

Sources:
U.S.D.A., Agricultural Marketing Service, "Farm Production and Value of Livestock and Livestock Products, 1938-1939, by States," July 1940. Special release (processed).
U.S.D.A., Agricultural Marketing Service, "Farm Production and Income - Chickens and Eggs, 1938-1939," May 1940 (processed).
U.S.D.A., Agricultural Marketing Service, "Farm Production and Income from Milk, by States, 1938-1939," July 1940 (processed).

Table 51. - Livestock and Poultry. Average Farm Value Per Unit, by Freight Rate Territories, 1939 1/

Item	Unit	Territory					United States average
		Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
Cattle and calves	$ per cwt.	7.65	5.98	7.62	6.32	6.95	7.19
Sheep and lambs	$ per cwt.	7.15	6.04	7.31	5.40	6.73	6.86
Hogs	$ per cwt.	6.59	6.23	6.02	5.94	6.79	6.23
Milk and milk products	$ per cwt.	1.95	2.13	1.14	1.69	1.69	1.63
Wool	¢ per lb.	24	25	21	24	22	22
Mohair	¢ per lb.	-	-	28	49	38	47
Chickens	¢ per head	62	49	45	40	47	51
Chicken eggs	¢ per doz.	20	18	14	15	20	17
Turkeys	$ per head	2.97	2.54	2.19	1.77	2.64	2.40

1/ Preliminary.

Source: U.S.D.A., Agricultural Marketing Service, "Farm Production and Value of Livestock and Livestock Products, 1938-1939, by States," July 1940. Special release (processed).

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[fol. 5663] Official teritory prices are higher than the United States average for all commodities for which comparisons are possible. In contrast, Western Trunk Line prices are lower than the national average on all of the livestock commodities studied except two, cattle and sheep. The remaining 3 territories show a fairly equal distribution of prices above and below average. No general conclusions can be drawn from the prices alone, however, because of differences in quality and form of product. Selected prices are discussed more completely later in this report.

Relation of Agricultural Resources to Agricultural Products

Farm Products over 500 Million Dollars

The preceding pages of this report have given a summary of relationships of the freight rate teritories with respect to present acreage, production, and value of agricultural crops and production and value of livestock products. The present section attempts to show how the agricultural resources of the territories are reflected in the present production of the major agricultural commodities.

Table 52 shows the eight major crops and livestock products arranged in the order of their national importance as measured by value produced.[1] These eight commodities, each with a value greater than one-half billion dollars, accounted for approximately 60 percent of the value of all crops and about 87 percent of the value of all livestock products shown in Table 50.

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[1] It should be noted that the figures for livestock and crops cannot be added together because a major part of corn and hay is consumed by livestock. Hence addition of the figures will include a duplication of value produced. Also, milk produced includes a certain amount of milk fed to calves causing a further duplication within livestock products. For a tabulation of value of livestock products with duplications eliminated, see Table 50.

Table 52. - Value of Principal Farm Products by Freight Rate Territories, 1939 1/
($500,000,000 and over)

Product	Territory					United States total
	Official	Southern	Western Trunk Line	Southwestern	Mountain-Pacific	
Milk and milk products	765,614	226,876	442,951	144,281	190,652	1,770,376
Corn, all	562,698	225,283	574,037	91,710	9,611	1,464,339
Cattle and calves	249,671	71,873	450,515	146,934	156,870	1,075,853
Hogs	328,609	133,492	479,736	79,172	37,567	1,058,576
Cotton, lint and seed	99	287,563	23,253	290,196	45,852	647,063
Hay, tame	242,592	79,639	130,997	26,421	121,233	601,062
Eggs	236,954	67,076	132,064	47,482	64,270	547,856
Wheat	121,156	16,455	214,354	55,177	103,490	510,674
	Percent of U. S. totals					
Milk and milk products	43.25	12.81	25.02	8.15	10.77	100.00
Corn, all	38.43	15.45	39.20	6.26	.66	100.00
Cattle and calves	23.21	6.68	41.87	13.66	14.58	100.00
Hogs	31.04	12.61	45.32	7.48	3.55	100.00
Cotton, lint and seed	.01	44.46	3.59	44.85	7.09	100.00
Hay, tame	40.36	13.28	21.79	4.40	20.17	100.00
Eggs	43.25	12.24	24.11	8.67	11.73	100.00
Wheat	23.73	3.23	41.97	10.80	20.27	100.00

1/ Preliminary.

Sources: Tables 47 and 50.

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[fol. 5665] *Dairy Products and Hay*

Milk and milk products accounted for over 19 precent of the gross agricultural income in 1939 (See Tables 36 and 50). Official territory leads in the production of milk with 36.18 percent of the U. S. total, and Western Trunk Line territory is next in importance with 35.76 percent (Table 49). The other territories in order of importance are Mountain-Pacific, 10.37 percent, Southern, 9.82 percent, and Southwestern, 7.87 percent. The differences in the relative importance of territories is more striking when farm values, rather than physical production, are compared. For example, Official teritory produces 43.25 percent of the farm value of milk and milk products while Western Trunk Line teritory, having nearly as much production, produces only 25.02 percent of the farm value. Southern territory falls in third place with 12.81 percent followed by Mountain-Pacific and Southwestern territories in the order named. The differences in physical production are not due alone to number of cows kept for milk, but also to the yield of milk per cow. The following tabulation shows the data with respect to yield:[1]

Territory	Milk cows on farms		Average production per cow
	(Thousands)	(Percent)	(Lbs.)
Official	7,885	32.96	4,981
Southern	3,180	13.29	3,351
Western Trunk Line	8,237	34.43	4,713
Southwestern	2,681	11.21	3,189
Mountain-Pacific	1,940	8.11	5,805
United States	23,923	100.00	4,538

Comparing these figures with Table 51 we see that Southern territory, having the lowest yield per cow, has the highest farm value per hundred pounds ($2.13). Official terri- [fol. 5666] tory with the next highest price [1] of $1.95 has the

[1] Price is not to be construed as price per unit of whole milk, but rather as average farm value of milk and milk products per 100 pounds of milk produced.

[1] U. S. D. A., "Agricultural Statistics," 1940, p. 429. Data for states divided by freight rate territory boundaries apportioned to territories on the basis of the milk produced in 1929 (Census county figures).

second highest yield per cow. Southwestern and Mountain-Pacific territories have the same average price but the yield per cow in Mountain-Pacific territory is 82 percent greater than in Southwestern territory. Western Trunk Line territory has the lowest price per unit, but the yield per cow of this territory is above the United States average.

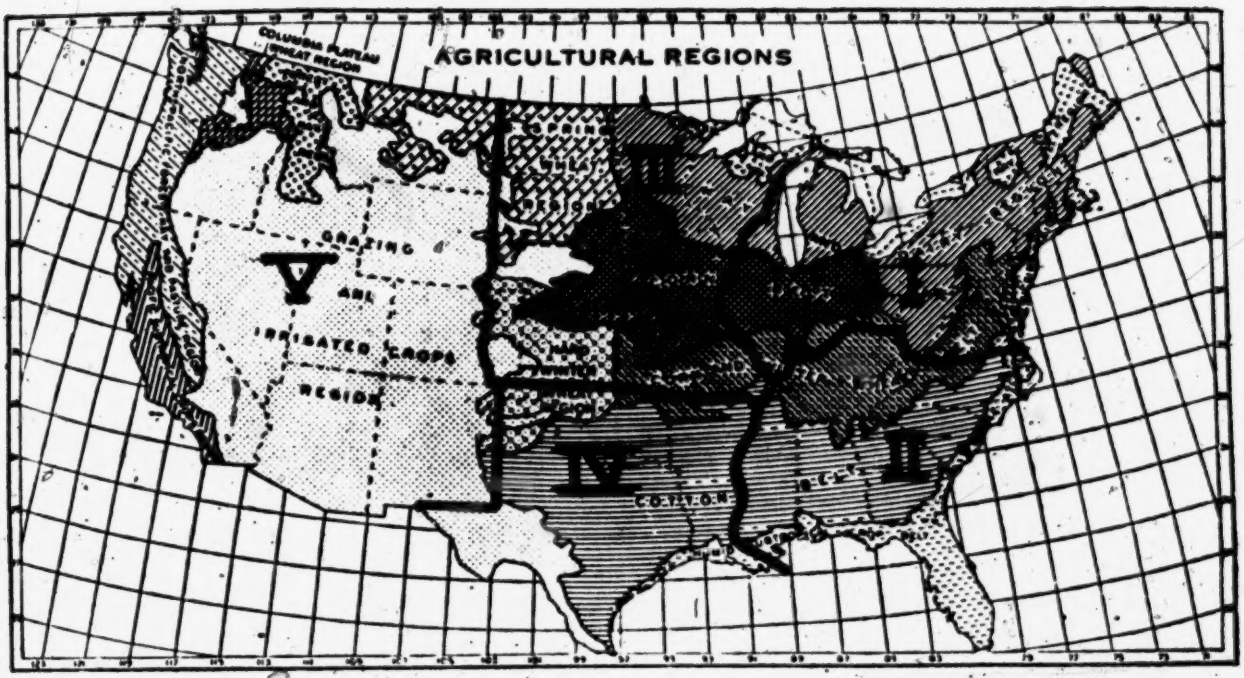
It is significant to note that Official and Western Trunk Line territories, having the highest total production and also higher than average yields per cow, are also outstanding leaders in the production of tame hay. Official territory produces 35.43 percent of the United States total tame hay and Western Trunk Line territory 30.06 percent. Differences in price per ton change the percents of U. S. farm value of tame hay to 40.36 percent in Official and 21.79 percent in Western Trunk Line territory. Another interesting observation is that prices of tame hay follow almost identically the same pattern by territories as do prices per hundred pounds of milk. Southern territory prices of both tame hay and milk are highest with Official territory in second place. Western Trunk Line territory has the lowest prices of both. Mountain-Pacific and Southwestern territories have the same milk prices but the price of tame hay is higher in Southwestern territory.

Since hay and dairy regions tend to coincide for large sections of the United States the reasons for their location in particular areas must be discussed together. Location of the hay and dairy region (Map 3) in Official and Western Trunk Line territories is due to a variety of factors, chief among which are apparently physical conditions. Finch and Baker say in this connection:

> "• • • This development of the dairy industry in the northeastern section of the United States is due to several causes, among which may be mentioned the proximity to the large city markets, especially im-

(Here follows 1 Photolithograph, side folio 5667)

Map 3



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 280. May 1937, p. 4.

[fol. 5668] portant in the production of market milk, and the cool summer climate which favors the production of dairy products of high quality, and although often preventing the proper maturity of corn for grain, permits its production for silage. The climate of the Northeastern States has also resulted in making them the most important hay-producing region in the United States, and a market for this hay is secured by keeping dairy cows. The relatively large summer rainfall, especially in the western section of the region, is also an important factor, since it promotes the maintenance of green pastures which greatly reduces the agricultural work of the summer so far as the feeding of cattle is concerned . . ."[1]

The less favorable conditions in other sections of the United States accounts principally for the lack of dairying except to supply local demand. The hitherto relatively low development of dairying in the South is caused not alone by physical conditions, but by a great variety of economic conditions, chief of which seems to be specialization in cotton production. In this connection Sherman F. Johnson of the U. S. Department of Agriculture says in speaking of the soil conservation problem:

"In periods of high cotton prices the relative returns for the use of land in alternative enterprises favored specialization in cotton, and the resulting income in those years provided somewhat more adequately for the farm population. However, the high percentages of land in cotton and in corn for mule feed developed a soil-erosion problem that has increased in seriousness in recent years. With lower incomes from cotton and no alternative employment for the farm population, the pressing need for cash income makes it extremely [fol. 5669] difficult to establish a type of farming that will maintain soil resources. The smaller the farm, and therefore the more inadequate the present production base, the more difficult it is to effect the adjustment.

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[1] V. C. Finch, Assistant in Agricultural Geography (Assistant Professor of Geology, University of Wisconsin) and O. E. Baker, Agriculturist, U. S. Dept. of Agriculture, "Geography of the World's Agriculture," 1917, p. 120.

Soil conservation requires the use of winter cover crops and the retention of part of the land in grass and other close-growing crops. To establish such a rotation requires cash outlay, and the immediate cash returns are likely to be less than for cotton. Thus the extreme pressure for cash income furnishes an effective resistance to change."[1]

In explaining the lack of hay production in the South Finch and Baker sum up the reasons as follows:

"The Southern States have a small hay acreage for several reasons: (1) A system of agriculture based almost entirely on cotton and corn, which are more productive and more restricted in their geographic range; (2) small farms, lack of capital, and a credit system which makes cash crops of primary importance; (3) the absence of a beef and dairy industry, due in part to the warm climate, the cattle tick, lack of ice for refrigeration, unskilled character of labor, and the limited local markets; (4) the prevalence of tenancy and the migratory character of the tenants, which discourages crop rotation; (5) frequent summer rains and high humidity detrimental to curing hay; (6) a considerable amount of waste land, the result of erosion of the surface soil, on which it is difficult to secure a good catch of grass; (7) climatic conditions to which northern hay crops are not adapted, and the absence of good perennial grasses and legumes.

[fol. 5670] "The rapidly extending use of the cowpea in the South, and the more frequent utilization of Bermuda grass and Johnson grass, combined with the growth of cities, improved transportation facilities, and increase of capital, which may be expected to result in a moderate development of dairying and other livestock enterprises, promise in large measure to correct these adverse conditions."[1]

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[1] Sherman E. Johnson, Head Agricultural Economist, Division of Farm Management and Costs, Bureau of Agricultural Economics, U. S. D. A., "Farm Management Problems in an Era of Change," art. in Yearbook of Agriculture, 1940, p. 504.

[1] Op. cit., p. 104.

The importance of hay to Mountain-Pacific territory (28 percent of total acreage harvested is due partly to the lack of other suitable crops and partly to the fact that hay can be converted into animal products whose concentrated value will bear the cost of long-distance transportation.[2]

Tables 53 and 54 indicate that Southern and Southwestern territories have never been large producers of hay, since the figures which make up these tables are taken from maximum acreages and yields in the past. The tables also indicate that if all of the land which has ever been used for hay in the past were put back into the production of hay again at the highest yield attained at any time in the past the relative standings of the territories would still be unaltered.

Corn

Corn is the most important crop from the standpoint of value, accounting for 27 percent of the farm value of all crops harvested in 1939 (see Table 47). Official and Western Trunk Line territories together produced 77.63 percent of the value of all corn (38.43 percent in Official territory and 39.20 percent in Western Trunk Line territory). Southern territory falls in third place with 15.45 percent of the total. The leading position of Official and Western Trunk Line territories is even more pronounced when physical production, rather than farm value, is compared.

[2] Finch and Baker, p. 103.

Table 53. - Tame Hay. Potential Production 1/ and Production in 1939 2/
by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Tons)			(1,000 tons)		
Official	27,727	22,026	79.44	1.45	1.22	84.14	40,187	26,832	66.77
Southern	8,240	8,111	98.44	1.17	0.93	79.49	9,635	7,519	78.04
Western Trunk Line.	21,800	17,140	78.62	1.75	1.33	76.00	38,209	22,765	59.58
Southwestern	3,092	3,044	98.45	1.58	1.05	66.46	4,896	3,191	65.17
Mountain-Pacific ..	10,133	8,026	79.21	2.39	1.92	80.33	24,227	15,419	63.64
United States ...	70,992	58,347	82.19	1.65	1.30	78.79	117,154	75,726	64.64
				Percent of total					
Official	39.06	37.75					34.30	35.43	
Southern	11.61	13.90					8.22	9.93	
Western Trunk Line.	30.71	29.37					32.62	30.06	
Southwestern	4.35	5.22					4.18	4.22	
Mountain-Pacific...	14.27	13.76					20.68	20.36	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of tame hay by freight rate territories was computed by applying the maximum yield (1879-1939) to the maximum acreage harvested (1879-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of acreage of tame hay harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., "Crops and Markets," Dec. 1939, p. 270.

U.S. D.A., B.A.E., "Revised Estimates of Tame Hay Acreage, Yield, and Production, 1866-1929," Dec. 1934 (Mimeographed)

U.S. D.A., B.A.E., Crop Reporting Board, "Revisions, Annual Legume Crops and All Tame Hay Acreage, Yield, and Production, Crop Years 1924-1935," January 1937.

U.S. D.A., "Yearbook of Agriculture," 1938 and 1939.

Fifteenth Census of U.S., 1930, Agriculture, Volume II (State and county figures).

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Table 54. - Wild Hay. Potential Production[1] and Production in 1939[2] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Tons)			(1,000 tons)		
Official	515	238	46.21	1.42	0.92	64.79	733	220	30.01
Southern	372	289	77.69	1.25	1.02	81.60	464	296	63.79
Western Trunk Line	14,855	7,675	51.66	1.21	.75	61.98	17,960	5,764	32.09
Southwestern	1,128	910	80.67	1.20	1.01	84.17	1,354	922	68.09
Mountain-Pacific	2,653	1,786	67.32	1.22	.89	72.95	3,249	1,598	49.18
United States	19,523	10,898	55.82	1.22	.81	66.39	23,760	8,800	37.04
				Percent of total					
Official	2.64	2.18					3.08	2.50	
Southern	1.90	2.65					1.96	3.36	
Western Trunk Line	76.09	70.43					75.59	65.50	
Southwestern	5.78	8.35					5.70	10.48	
Mountain-Pacific	13.59	16.39					13.67	18.16	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of wild hay by freight rate territories was computed by applying the maximum yield (1912-1939) to the maximum acreage harvested (1912-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of acreage of wild hay harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., "Crops and Markets," Dec. 1939, p. 270.
U.S. D.A., B.A.E., Crop Reporting Board, "Wild Hay Revisions, 1912-1923," June 1937 (mimeographed).
U.S. D.A., "Yearbook of Agriculture," 1926-1935.
U.S. D.A., "Agricultural Statistics," 1936-1939.
Fifteenth Census of U.S., 1930, Agriculture, Volume II (State and county figures).

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[fol. 5673] Western Trunk Line leads with 41.52 percent of the U. S. total followed very closely by Official territory with 39.66 percent. Either one of these territories produces more than twice the corn of the other three territories combined. In spite of this fact, corn is an important crop to Southern territory as well, a larger portion of the harvested acreage being planted to corn than to any other crop. Judged from the standpoint of the ratio of corn acreage to total acreage harvested, corn is more important to Southern territory than to any other territory. It accounts for 41.33 percent of the harvested acreage in Southern territory as compared to 30.82 percent in Official, 26.61 percent in Western Trunk Line, and 20.68 percent in Southwestern territory. (Table 44.) The relatively lower standings of Southern and Southwestern territories when production rather than acreage is used as a basis for comparison are due to the low yields in these areas. From Table 46 the yield per acre is 15.0 bushels in Southern territory and 15.5 bushels in Southwestern territory as compared with 46.8 bushels in Official and 31.8 bushels in Western Trunk Line. This accounts for the fact that while Southern territory has 24.57 percent of the corn acreage harvested, yet it has only 12.46 percent of the total corn production. The differences in corn yields may be attributed partially to the introduction of hybrid corn into the corn belt states in recent years. The use of hybrid corn has not spread to the western states because moisture limitations to yields would not make it profitable. "Rather slow adoption of hybrid corn in the South seems to be indicated because of the greater cost, relatively low corn yields, and the fact that corn is not a southern cash crop. Insect damage makes it difficult to maintain inbred lines of corn in that section, and may mean that the cost of producing hybrid seed in the South will be greater than in the Corn Belt."[1] Its use in the corn belt, however, will probably increase and the U. S. Dept. of Agriculture estimates that eventually, perhaps before 1950, 80 to 85 percent of the corn acreage in this area will be planted to hybrids.[2]

Reference to Table 55 indicates that the relative position of the freight rate territories remains unchanged when po-

[1] U. S. D. A., "Technology on the Farm," August 1940, p. 22.

[2] Ibid.

Table 55. - All Corn. Potential Production[1/] and Production in 1939,[2/] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Bushels)			(1,000 bushels)		
Official	29,309	22,185	75.69	48.2	46.8	97.10	1,412,391	1,038,642	73.54
Southern	25,961	21,820	84.05	20.9	15.0	71.77	541,938	326,447	60.24
Western Trunk Line	54,933	34,154	62.17	41.1	31.8	77.37	2,255,105	1,087,488	48.22
Southwestern	16,171	9,898	61.21	27.0	15.5	57.41	437,227	153,158	35.03
Mountain-Pacific	1,463	746	50.99	29.2	18.0	61.64	42,668	13,402	31.41
United States	127,837	88,803	69.47	36.7	29.5	80.38	4,689,329	2,619,137	55.85
	Percent of total								
Official	22.93	24.98					30.12	39.66	
Southern	20.31	24.57					11.56	12.46	
Western Trunk Line	42.97	38.46					48.09	41.52	
Southwestern	12.65	11.15					9.32	5.85	
Mountain-Pacific	1.14	0.84					0.91	0.51	
United States	100.00	100.00					100.00	100.00	

1/ Potential corn production by freight rate territories was computed by applying the maximum yield (1879-1939) to the maximum acreage harvested (1879-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of corn acreage harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., "Crops and Markets," Dec. 1939, p. 267.
U.S. D.A., B.A.E., "Revised Estimates of Corn Acreage, Yield, and Production, 1866-1929," May 1934 (mimeographed).
U.S. D.A., "Yearbook of Agriculture," 1932-1935.
U.S. D.A., "Agricultural Statistics," 1936-1939.
Fifteenth Census of the U.S., 1930, Agriculture, Volume II (State and county figures).

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[fol. 5675] tential acreage and production are considered rather than 1939 acreage and production. Western Trunk Line territory somewhat advances its lead over Official territory, however. The figures show that, although corn acreage and production could be increased materially in all territories, the greatest increase could be effected in Western Trunk Line territory (approximately 1.2 billion bushels). They also indicate that the potential production (based on past experience) of Southern, Southwestern, and Mountain-Pacific territories combined would no more than equal the 1939 production of either Official or Western Trunk Line territories.

The reasons for the location of the corn belt in southern sections of Official and Western Trunk Line territories and the northern section of Southern territory (Map 3) are primarily physical reasons. The physical limitations to corn production are set forth by Finch and Baker as follows:

> "The western limit of extensive corn production in the United States follows more or less closely the line of mean summer (June, July, and August) precipitation of 8 inches, * * * Practically no corn is grown where the mean summer temperature is less than 66°. * * *
>
> "Although corn is thus grown to some extent under a wide range of climatic conditions, the most favorable environment is definitely restricted in area. The climatic boundaries of the region of greatest production in the United States are a mean summer temperature of 70° to 80°, a mean night temperature exceeding 58°, a frostless season of over 140 days, and an annual precipitation of 25 to 50 inches, of which 7 inches occur during July and August. The best corn soils are fertile, dark colored loams or silt loams, warm, well drained, and well supplied with humus."[1]

Thus we can state, in general, that average summer precipitation establishes the western limit to profitable corn production (Map 11) and that the northern limit is set

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[1] Op. cit., p. 29.

(Here follows 3 Photolithographs, side folios 5676-5678)

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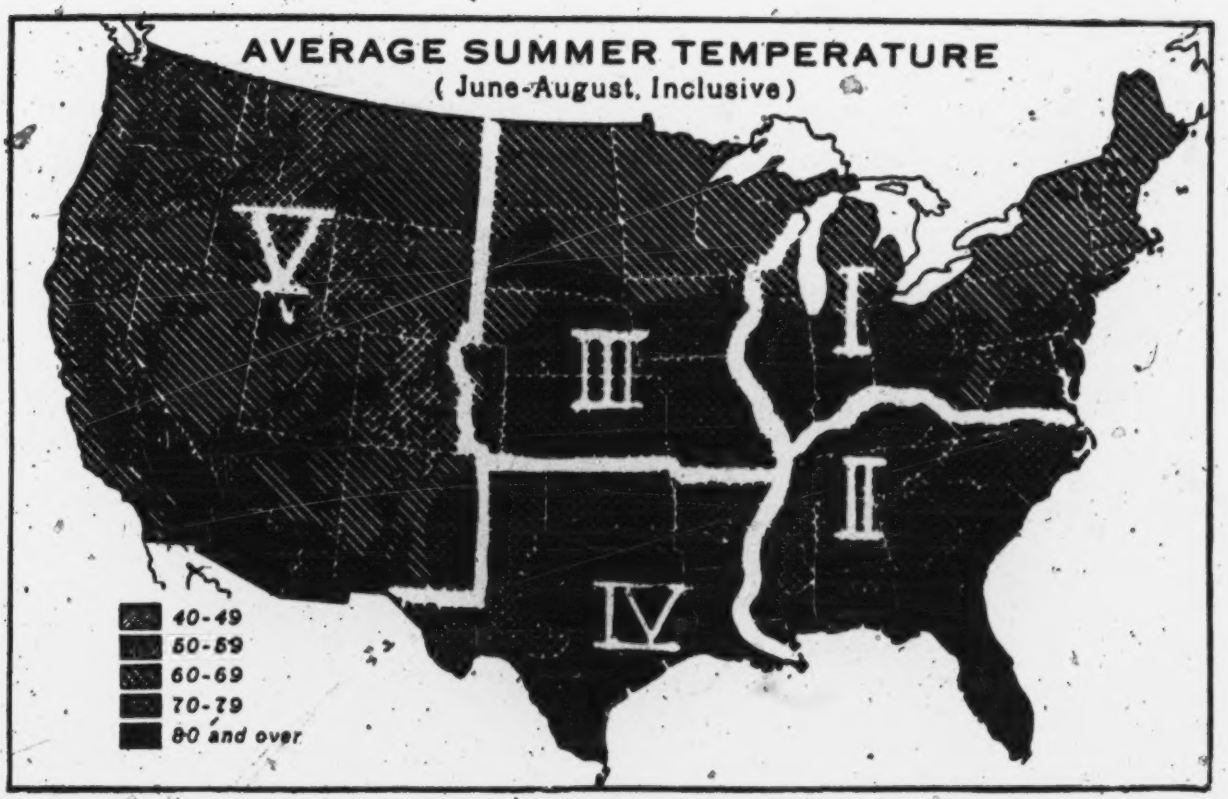
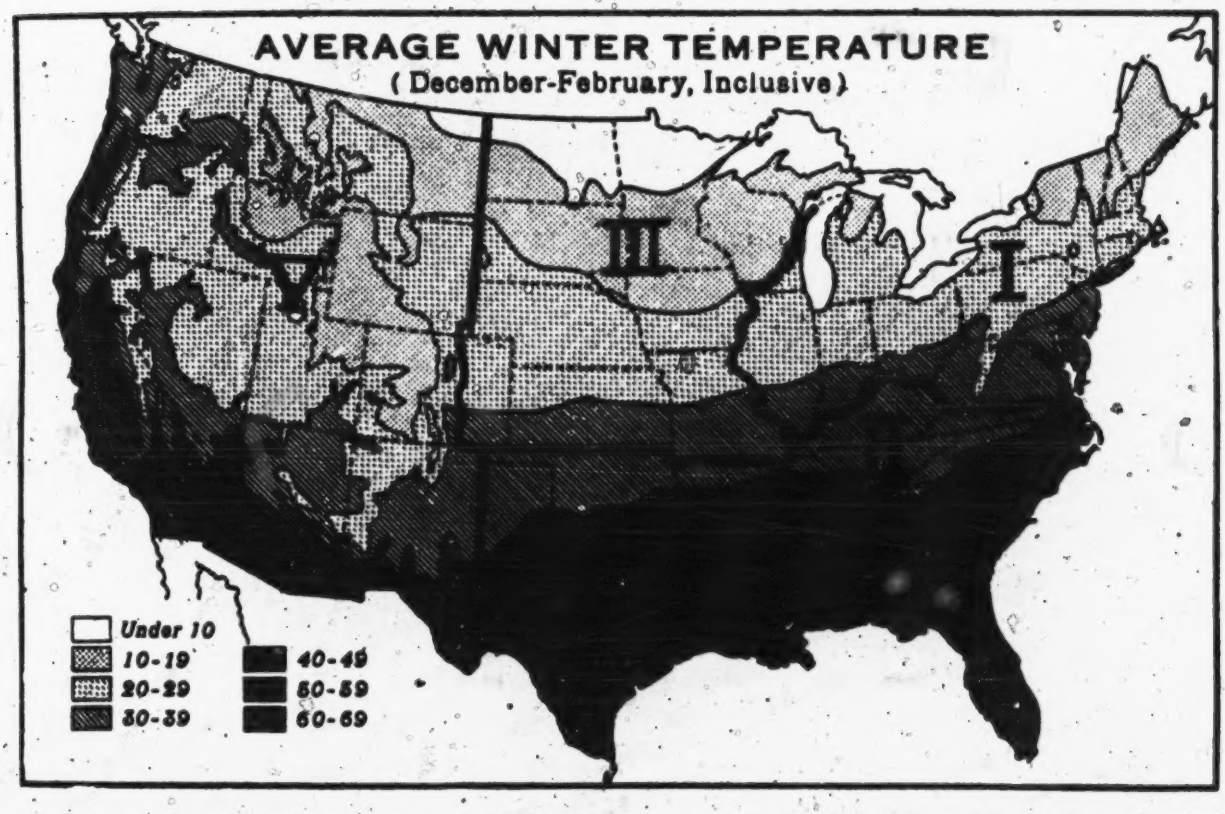
Map 4



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 260, May 1937, p. 6.

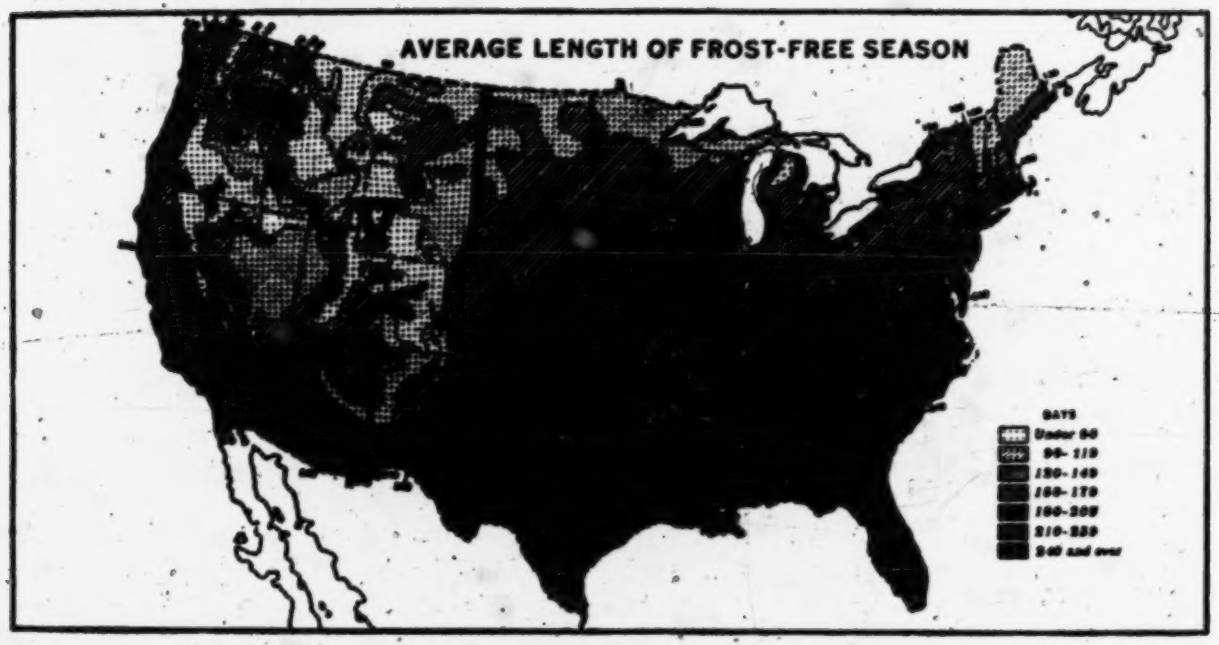
Map 5



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 260, May 1937, p. 6.

Map 6



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk-Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 260, May 1937, p. 7.

[fol. 5679] principally by temperature (Map 4). The southern limit of the corn belt is not set by physical conditions, but is set by competition with cotton. Cotton, having a higher productivity per acre forces corn production further north, except corn which is grown primarily for local consumption.[1]

Corn is grown principally in the rich Chernozem and Prairie soils in Western Trunk Line territory and in the Gray-Brown Podzolic soils in Official and Southern territories (Map 7). Although the Gray-Brown Podzolic soils are generally acid and have only medium fertility (Table 56), they are "responsive" to applications of lime and fertilizer. Charles E. Kellog, Principal Soil Scientist, U. S. Department of Agriculture,[2] states, "Considering their medium fertility * * *, together with the desirable climate which allows the growth of a wide variety of plants, these soils are admirably adapted to the development of stable agricultural communities of the general farming type * * *" Although this region is considered to be a part of the "corn belt", it raises such a variety of crops that it might just as well be called the "general farming" region.[3]

Meat Animals

Western Trunk Line territory is outstanding in the production of the principal meat animals, producing 46.92 percent of the total weight of hogs and 39.51 percent of the live weight of cattle and calves. Official territory falls in second place with 29.35 percent of the hogs and 21.83 percent of cattle and calves. Southern territory ranks third in production of hogs with 12.62 percent of the total, and

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[1] Foster F. Elliott, Bureau of the Census, "Types of Farming in the United States," 1933, p. 122-123, and Finch and Baker, p. 30.

[2] U. S. D. A., "Development and Significance of the Great Soil Groups of the United States," Misc. Publication No. 229, April 1936, p. 21.

[3] Elliott, ibid., p. 157.

(Here follows 2 Photolithographs side folios 5680-5681)

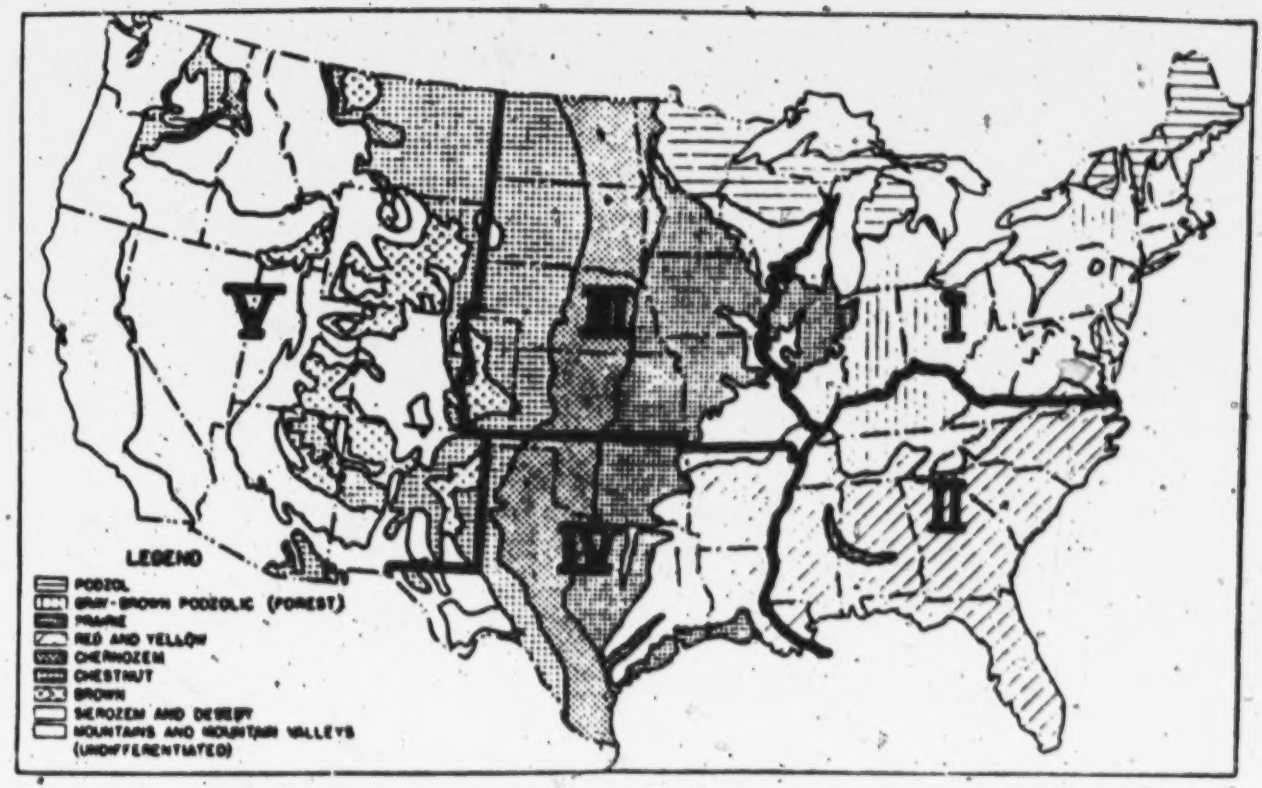
Table 56. - General Character and Relationships of the Zonal Groups of Soils 1/

Zonal group of soils	Native vegetation	Climate	Natural fertility (crop plants)
Chernozem	Tall-grass prairie	Temperate to cool, subhumid.	Very high
Chestnut	Mixed tall-and short-grass prairie	Temperate to cool, arid	High
Brown	Short-grass prairie	Do.	High
Prairie	Tall-grass prairie	Temperate, moist	High
Sierozem	Short grass and desert plants	Temperate to cool, arid	Medium to high (if irrigated)
Desert	Desert plants	Do.	Do.
Gray-Brown Podzolic (Forest)	Deciduous forest	Cool-temperate, moist	Medium
Red	Forest, largely deciduous	Warm-temperate, moist	Medium
Podzol	Coniferous forest (usually)	Cool, moist	Low
Yellow	Forest, largely coniferous	Warm-temperate, moist	Low

1/ These statements are necessarily general and apply to the normal soils as illustrated in Map 7.

Source: U.S.D.A., "Development and Significance of the Great Soil Groups of the United States," Misc. Publication No. 229, April 1936, pp. 33-34.

Map 7



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 229, April 1936, p. 31.

[fol. 5682] Southwestern territory ranks third in production of cattle and calves (15.54 percent) followed very closely by Mountain-Pacific territory with 15.08 percent of the total. Production of these two types of livestock follows rather closely the production of the principal feed crops. For example, Western Trunk Line territory, which leads in the production of hogs and cattle, produces 42 percent of the corn, 57 percent of the oats, 65 percent of the barley, 70 percent of the rye, 32 percent of the grain sorghums, 30 percent of the tame hay, 65 percent of the wild hay, and 65 percent of the sweet sorghums of the United States. Official territory, falling in second place, produces 40 percent of the corn, 29 percent of the oats, 21 percent of the rye, and 35 percent of the tame hay of the United States. The relatively high percents of cattle and calves produced in Mountain-Pacific and Southwestern territories are undoubtedly due to the extensive grazing areas.

A comparison of cattle prices shows that Official territory has the highest farm prices of $7.65 per hundred pounds followed by Western Trunk Line with $7.62. Southern territory shows the lowest price per hundred ($5.98). Mountain-Pacific prices are highest on hogs ($6.79) followed in second place by Official territory with $6.59. Southwestern teritory prices are lowest ($5.94). Very little information can be gained from this comparison of prices, however, since there are undoubtedly great differences in the kind and quality of animals produced. For example, a portion of the cattle and calves are produced to replace existing dairy herds (especially in Western Trunk Line and Official territories), but no figures are available through which this portion can be ascertained.

Cotton

Cotton, the second most important crop and the most important strictly cash crop, accounted for about 12 percent of the farm value of crops harvested in the United States in 1939. The major part of the cotton production is divided about equally between Southern and Southwestern territories (43 percent and 47 percent, respectively). It accounted for 25.45 percent of the farm value of crops harvested in Southern territory in 1939 and 44.71 percent of the value of crops in Southwestern territory, and is the

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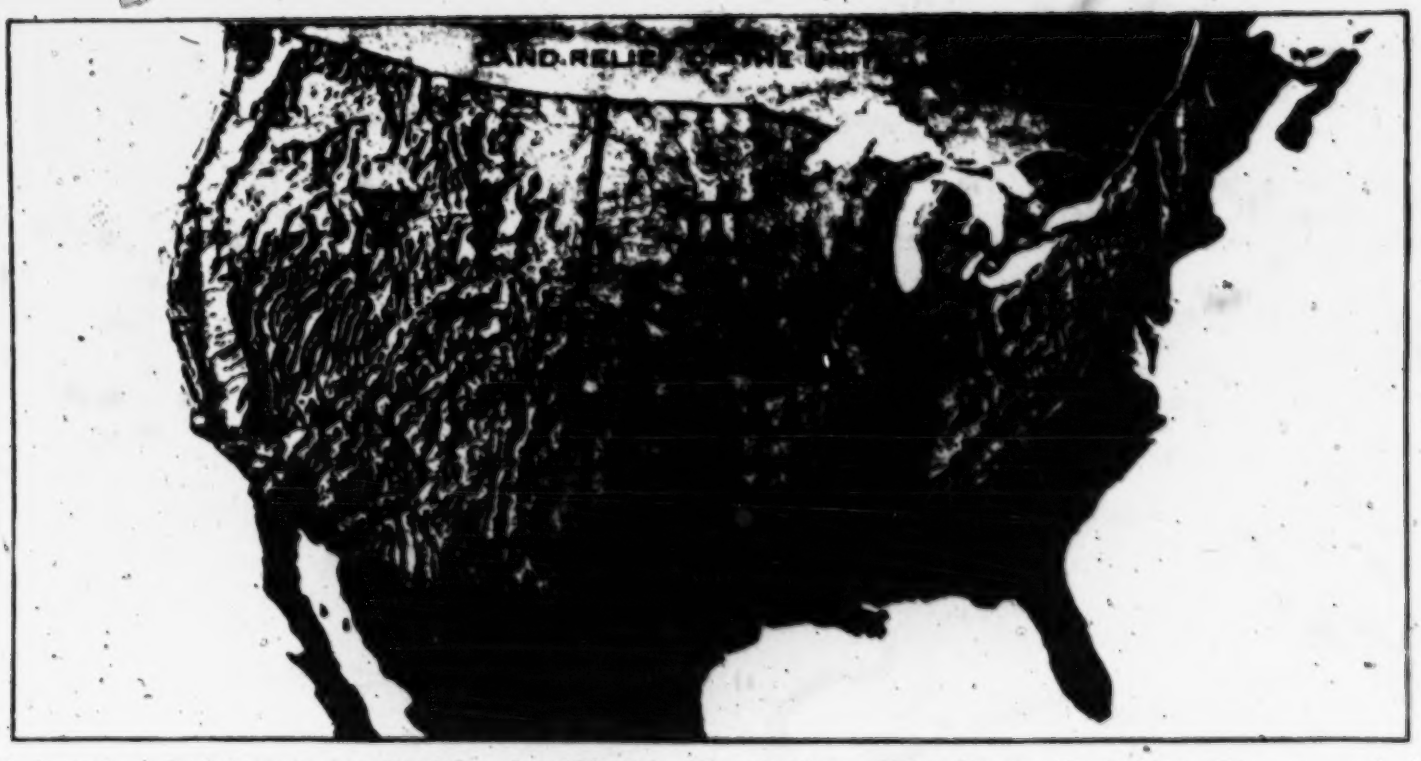
Map 8



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 260, May 1937, p. 5.

[fol. 5684] most important crop in the latter area both from the standpoint of acreage harvested and value produced. Farm value of cotton in Southern territory was greater than the farm value of any other crop, although a larger acreage of corn was grown in 1939.

Reference to Table 57 would seem to indicate that even though acreage of cotton might be doubled (based on maximum acreages in the past) the relative position of Southern and Southwestern territories would remain almost identical. For example, Southern territory harvested 39.10 percent of the cotton acreage in 1939 which compares with its 39.24 percent of the potential cotton acreage. Likewise Southwestern territory with 56.74 percent of the acreage harvested in 1939 has 57.42 percent of the potential cotton land (as computed by this method). The positions of the two territories are only slightly different when potential production data are compared, the slight difference being due to a greater spread in the case of Southwestern territory between 1939 and maximum yields.

Cotton has a very limited area in which it may be grown since it is limited on the north by the mean summer temperature line of 77° and a frostless season of 200 days (Maps 4 and 6) and is limited on the west by the line of mean annual precipitation of 23 inches (Map 9).[1]

Furthermore, autumn rainfall must be light in order to facilitate picking. Map 12 shows that there is heavy fall precipitation along the Gulf coast, which is one of the factors setting the southern limit to the cotton belt. Cotton is grown principally on the Red and Yellow soils of Southern territory and parts of Southwestern territory (Map 7) and on the rich "Black Prairie" and Chernozem soils of Texas.

Chickens and Eggs

The production of eggs is most heavily concentrated in Official territory, which produces 38 percent of the United States total. Western Trunk Line territory is the second largest producer with 30 percent of the total. Southern,

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[1] Finch and Baker, op. cit., p. 53.

Table 57. - Cotton. Potential Production[1] and Production in 1939[2] by Freight Rate Territories.

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939 [3]	Percent of maximum	Potential [4]	1939	Perce of potent
	(1,000 acres)			(Lbs., net wt.)			(1,000 bales, gross wt. in 500 lb. bales)		
Official	14	4	28.57	332	191	57.53	10	2	20.0
Southern	19,408	9,301	47.92	317	264	83.28	12,877	5,117	39.7
Western Trunk Line	558	377	67.56	561	555	98.93	655	437	66.7
Southwestern	28,394	13,495	47.53	291	195	67.01	17,259	5,494	31.8
Mountain-Pacific	1,078	608	56.40	592	587	99.16	1,335	747	55.9
United States 5/	49,452	23,785	48.10	311	238	76.53	32,136	11,797	36.7
	Percent of total								
Official	0.03	0.02					0.03	0.02	
Southern	39.24	39.10					40.07	43.38	
Western Trunk Line	1.13	1.59					2.04	3.70	
Southwestern	57.42	56.74					53.71	46.57	
Mountain-Pacific	2.18	2.55					4.15	6.33	
United States 5/	100.00	100.00					100.00	100.00	

1/ Potential production of cotton by freight rate territories was computed by applying the maximum yield (1879-1939) to the maximum acreage harvested (1879-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of cotton acreage harvested in 1929 (Census county figures).

2/ Preliminary.

3/ Found for each territory by computing production in net pounds and dividing by acreage harvested.

4/ Found for each territory by computing potential production in net pounds and dividing by 478 (approxima net weight of 500 pound gross weight bale).

5/ Excluding "Other States" for which, in 1939, the following data are reported: acreage harvested, 20,000; yield per acre, 470 lbs.; and production, 20,000 bales.

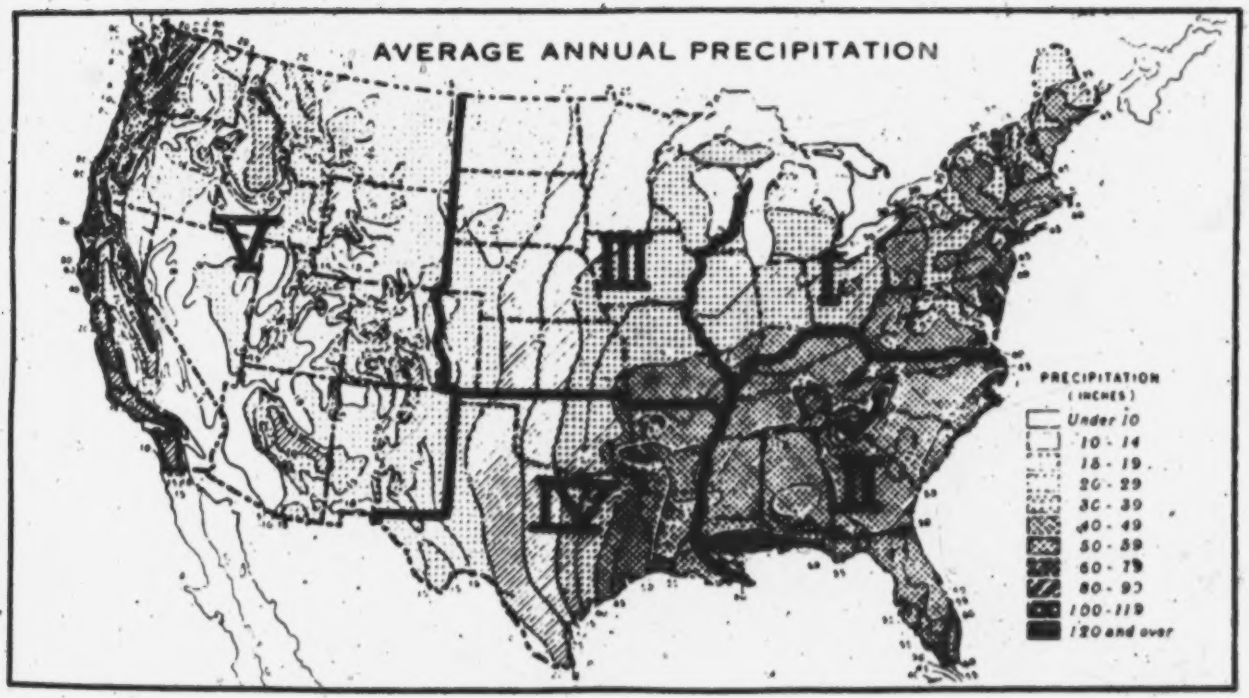
Sources:

U.S. D.A., "Agricultural Statistics," 1940, p. 110.

U.S. D.A., Agricultural Marketing Service, Crop Reporting Board, "Cotton Acreage, Yield, and Production 1866-1938," September 1940 (processed).

Fifteenth Census of U.S., 1930, Agriculture, Volume II (State and county figures).

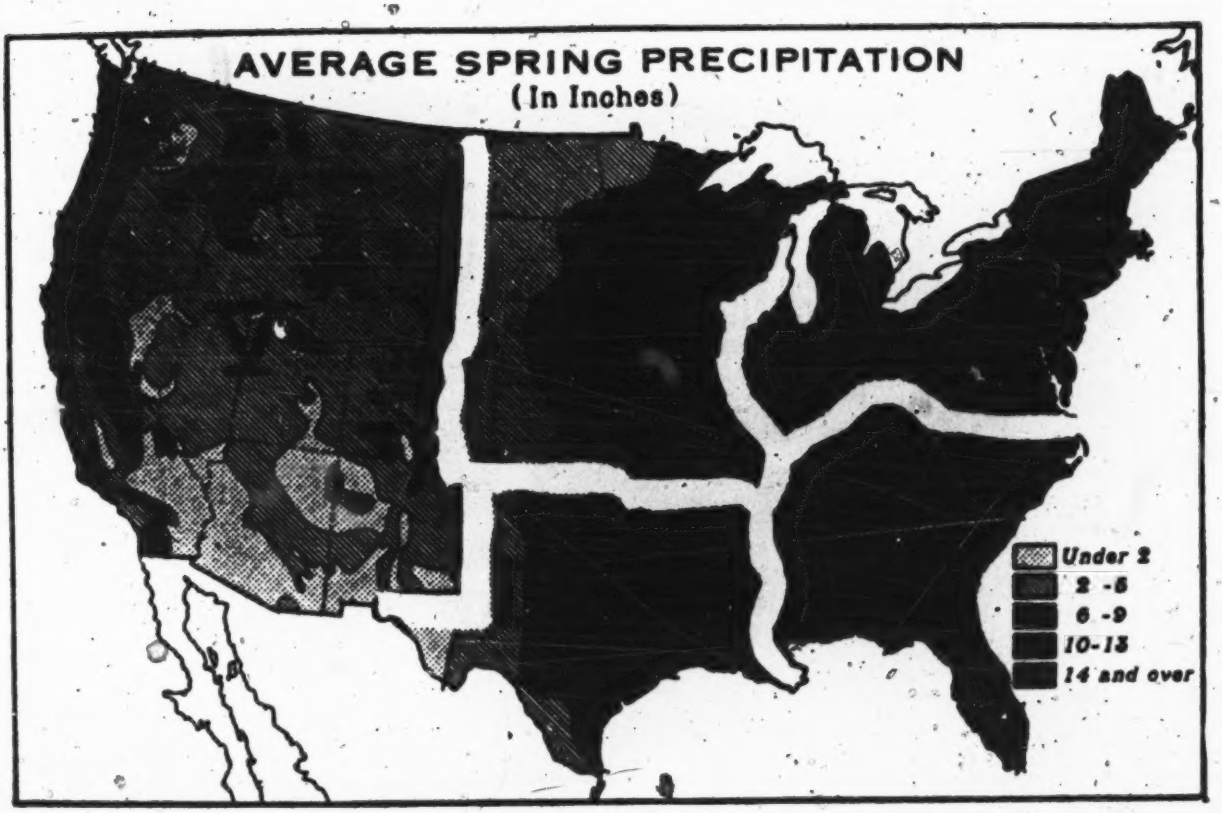
Map 9



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 280, May 1937, p. 10.

Map 10



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 260, May 1937, p. 8.

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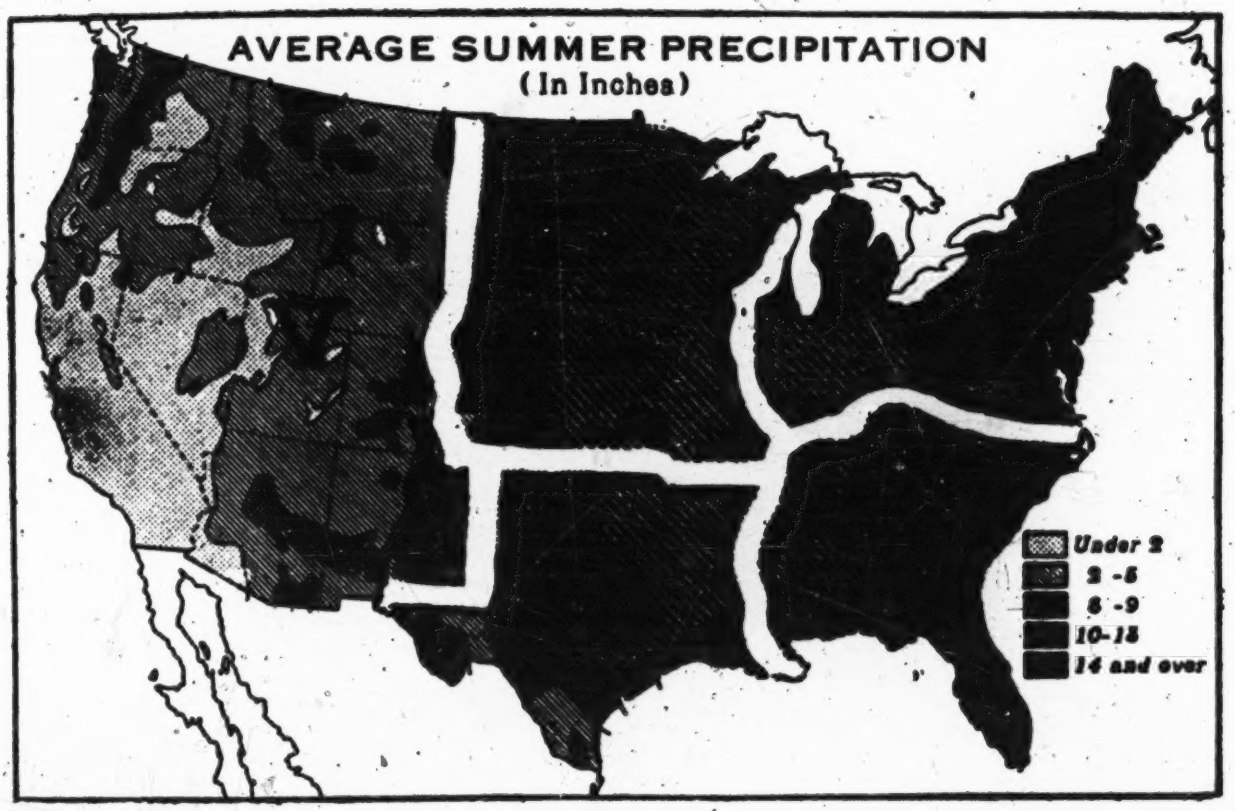
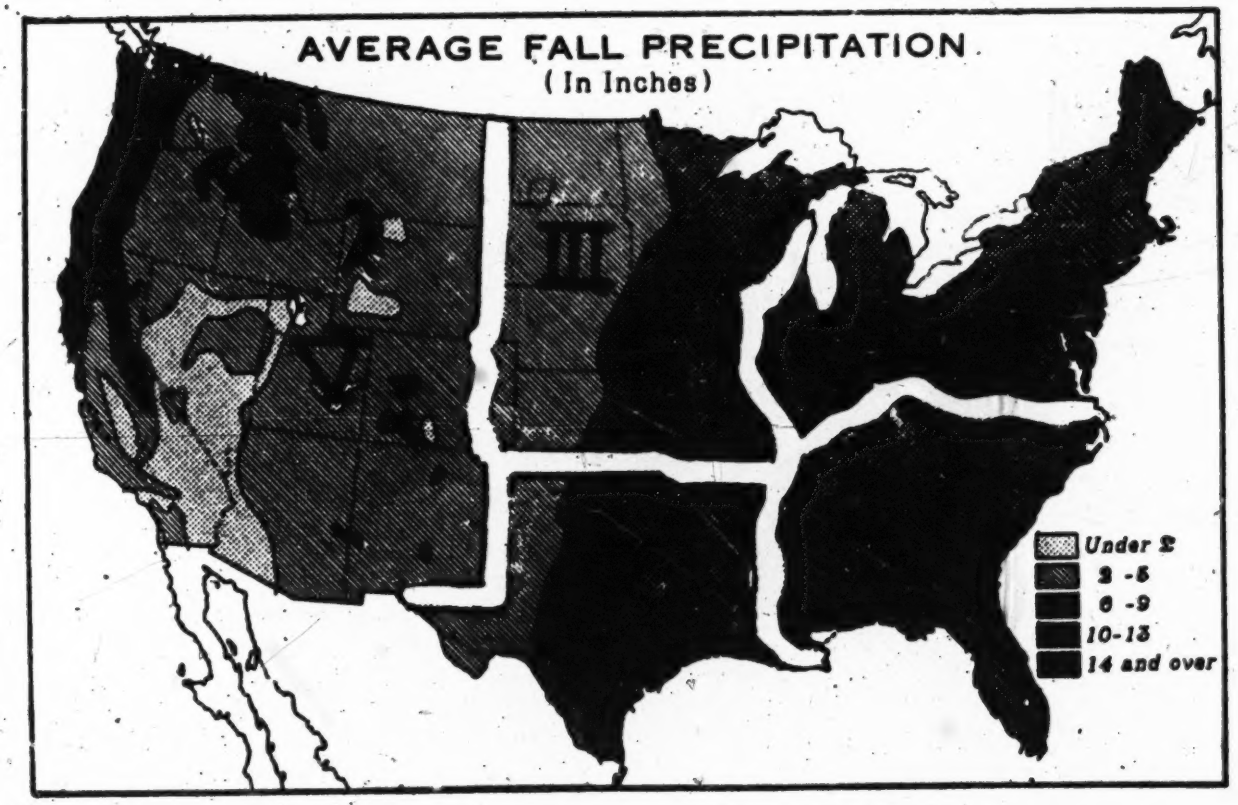
Map 11



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 260, May 1937, p. 9.

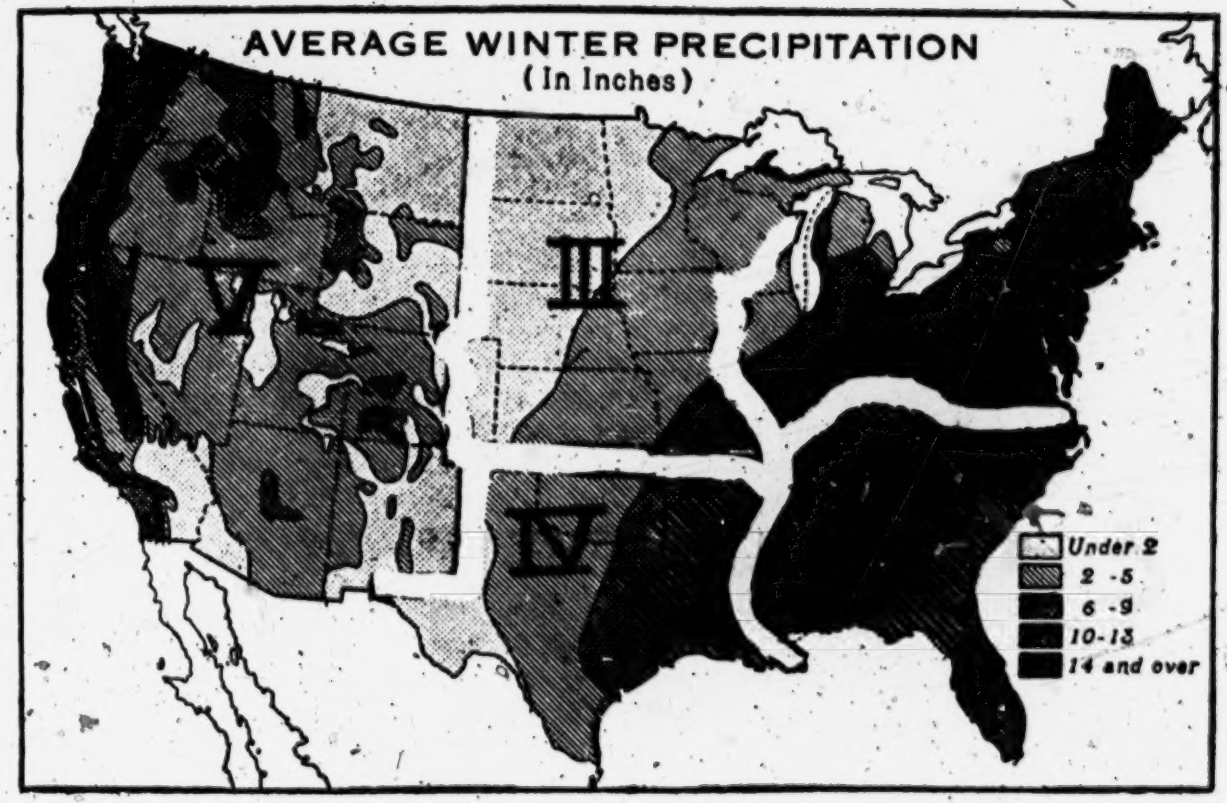
Map 12



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 260, May 1937, p. 9.

Map 13



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 260, May 1937, p. 8.

[fols. 5691] Southwestern, and Mountain-Pacific territories produce 12, 10, and 10 percent respectively. Average farm prices of eggs as of 1939 vary from 14¢ per dozen in Western Trunk Line territory to 20¢ in Official and Mountain-Pacific territories. Prices in Southern territory (18¢) and Southwestern territory (15¢) are very near the United States average of 17¢. The considerable variation in prices between Official and Western Trunk Line territories (20¢ and 14¢, respectively) helps to account for the fact that Official territory produces 43 percent of the United States total value as compared with 24 percent in Western Trunk Line.

The production of chickens follows fairly closely the production of eggs as outlined above, except that Southern territory produces relatively more chickens than eggs and Official territory relatively less. The importance of chickens and eggs in the national diet may be demonstrated by the fact that their aggregate value in 1939 exceeded the total farm value of cotton and cottonseed by 38 percent and exceeded the total farm value of wheat by 75 percent. Their aggregate value was just 17 percent under the value of cattle and calves and 15 percent under the value of hogs.

Wheat

Wheat, having the third largest acreage of any crop, is produced chiefly in Western Trunk Line territory. This territory produced 42.57 percent of the national total in 1939, or approximately the production of Official and Mountain-Pacific territories combined (21.56 and 21.57 percent, respectively). Wheat, however, is very important to Mountain-Pacific territory which is demonstrated by the fact that it had a larger harvested acreage than any other crop in that area in 1939. Also the yield per acre in this territory is considerably above the national average. Western Trunk Line territory, which had the greatest acreage in 1939, had the lowest yield per acre, which accounts for the fact that although it had 52 percent of the harvested acreage of wheat it produced only 42 percent of the total wheat crop.

Map 3 shows the location of the principal wheat growing [fol. 5692] regions in the United States. The physical

limits to wheat production are set forth by Finch and Baker as follows:[1]

Reference to the maps on temperature and rainfall indicates that the limits established above cover a very substantial portion of the eastern section of the United States. Wheat tends to be crowded out of the more productive regions, however, because of the competition of other crops, especially corn. In this connection Finch and Baker[2] state:

[fol. 5693] "... Since corn is a highly productive crop, yielding on the average about twice as much

[1] Op. cit., pp. 14-19.

"Although wheat is grown in several localities in the United States on an annual rainfall of less than 10 inches, it is generally not a safe crop where the mean annual precipitation is less than 15 inches • • • Where the rainfall exceeds 45 inches a year wheat does not thrive, partly because the soils in such regions have undergone more leaching than soils in subhumid regions, but principally because rusts and other fungus diseases are more prevalent. The difficulty of harvesting in rainy weather is also an important factor. • • •

"Wheat is grown in the United States mostly on silt-loam and clay-loam soils and requires less humus than corn. Very little wheat is grown on sandy soils, since the yield is generally too small to be profitable. • • •

"... In the humid eastern United States, the southern boundary of the winter-wheat belt follows the isotherm of 68° during the two months preceding harvest (June 15). Early-maturing varieties are a necessity along this southern margin because of the greater damage to late varieties by rust. • • • The northern frontier of winter wheat follows in a general way the mean winter temperature line of 20° • • •

"... The northern limit of spring wheat is approximately the mean summer temperature of 58°, which is found in the United States only in the western mountains."

[2] Op. cit., p. 29.

grain and, including the fodder, over three times as much food per acre as either wheat or oats, the corn crop in the United States, within its optimum geographic limits, reduces other crops, except cotton, to a subordinate position, and especially those which require labor at the same time of year."

Thus wheat tends to be crowded out of the more productive sections of Western Trunk Line and Official territories into the more arid Great Plains region.

Since wheat is adapted to a fairly wide range of climatic conditions the wheat acreage of the United States could be almost doubled as is evidenced by Table 58 which shows the composite maximum wheat acreages of the states comprising each territory. The greatest rate of increase over 1939 could be had in Southern territory (over 3 times), but the greatest aggregate increase in acreage could be obtained in Western Trunk line territory (23.5 million acres). Potential production, as shown, could only occur in case maximum acreage in the past should coincide with maximum yield which, of course, if very unlikely. The table indicates, though, that even with 1939 yields the production of wheat could be materially increased in all territories. If the acreage in all territories was increased up to the maximum, however, the relative positions of the territories would be approximately the same except that the ranking of Mountain-Pacific and Official territories in second and third places, respectively, would be reversed under such a comparison.

Farm Products of 50 to 500 Million Dollars

The next group of agricultural commodities, whose value in 1939 ranges from 50 million to 500 million dollars, accounts for another 28 percent of farm value of crops harvested; and the remainder of livestock products studied,[1] except for mohair.

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[1] Among the livestock and livestock products not studied in this report are horses, mules, goats, ducks, geese, and honey.

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Table 58. - All Wheat. Potential Production[1/] and Production in 1939[2/] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Bushels)			(1,000 bushels)		
Official	17,433	8,291	47.56	24.9	19.6	78.71	434,500	162,783	37.46
Southern	5,139	1,663	32.36	17.2	11.7	68.02	88,157	19,473	22.09
Western Trunk Line	51,355	27,833	54.20	20.9	11.5	55.02	1,072,008	321,416	29.98
Southwestern	10,373	7,123	68.67	18.0	12.4	68.89	186,568	88,478	47.42
Mountain-Pacific	13,772	8,786	63.79	27.0	18.5	68.52	372,024	162,821	43.77
United States	98,072	53,696	54.75	22.0	14.1	64.09	2,153,257	754,971	35.06
	Percent of total								
Official	17.78	15.44					20.18	21.56	
Southern	5.24	3.10					4.09	2.58	
Western Trunk Line	52.36	51.83					49.79	42.57	
Southwestern	10.58	13.27					8.66	11.72	
Mountain-Pacific	14.04	16.36					17.28	21.57	
United States	100.00	100.00					100.00	100.00	

1/ Potential wheat production by freight rate territories was computed by applying the maximum yield (1879-1939) to the maximum acreage harvested (1879-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of wheat acreage harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., "Crops and Markets," Dec. 1939, p. 268, and December issues, 1936-1938.
U.S. D.A., B.A.E., "Revised Estimates of Wheat Acreage, Yield, and Production, 1866-1934," Sept. 1934, Reissued May 1937 (mimeographed).
U.S. D.A., "Yearbook of Agriculture," 1937-1939.
Fifteenth Census of U.S. 1930, Agriculture, Volume II (State and county figures).

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[fol. 5695] Altogether, the crops whose farm value in 1939 exceeded 50 million dollars accounted for about 88 percent of the total farm value of all crops. They also accounted for all crops whose total farm value exceeded 1 percent of the total for all crops.

Table 59 shows that 88.08 percent of the tobacco harvested in 1939 was produced in Southern territory and that 10.72 percent was produced in Official territory. Tobacco can be grown throughout a wide range of latitude, but soil and climate have an important effect on the kind of tobacco grown. Official territory produces principally cigar leaf tobaccos and Southern territory produces principally chewing plug, granulated smoking, and cigarette tobaccos. Tobacco accounts for only 5.29 percent of U. S. farm value of crops produced in 1939, but it accounts for 21.75 percent of the farm value of crops in Southern territory; hence it is very important to this area.

Tobacco

Table 59 indicates that tobacco acreage could be nearly doubled in Official territory, but that this added acreage would still not materially increase the position of Official territory in relation to Southern territory. The acreage of tobacco harvested in Southern territory in 1939 amounted to 85 percent of the aggregate maximum acreages in the past of the states in Southern territory. It should also be noted that tobacco yields in 1939 were very nearly maximum yields.

Oats

Over half (56.78 percent) of the oats produced in 1939 were grown in Western Trunk Line territory and 28.62 percent in Official territory. Oats can be grown over a wide range of climatic and soil conditions, but grow best in cool, moist climates such as are found in the northeastern United States.[1] They form an important part of the crop rotation system in rotation with corn and also serve as a nurse crop for hay crops such as clover or timothy. Oats accounted for 5.14 percent of the value of all crops harvested in 1939.

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[1] Finch and Baker, p. 35.

5696

Table 59. - Tobacco. Potential Production[1] and Production in 1939[2] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Pounds)			(1,000 pounds)		
Official	396	192	48.48	1,165	1,034	88.76	460,855	198,273	43.02
Southern	2,119	1,804	85.13	940	902	95.96	1,990,673	1,628,203	81.79
Western Trunk Line	49	18	36.73	1,254	1,204	96.01	61,584	22,178	36.01
Southwestern	.3	-	-	661	-	-	2,049	-	-
Mountain-Pacific	-	-	-	-	-	-	-	-	-
United States	2,567	2,014	78.46	980	918	93.67	2,515,161	1,848,654	73.50
	Percent of total								
Official	15.42	9.53					18.32	10.72	
Southern	82.55	89.58					79.15	88.08	
Western Trunk Line	1.91	0.89					2.45	1.20	
Southwestern	0.12	-					0.08	-	
Mountain-Pacific	-	-					-	-	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of tobacco by freight rate territories was computed by applying the maximum yield (1879-1939) to the maximum acreage harvested (1879-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of acreage of tobacco harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., B.A.E., "Revised Estimates of Tobacco Acreage, Yield per Acre, and Production, 1866-1929," August 1935 (mimeographed).

U.S. D.A., B.A.E., "Tobacco Revisions, Acreage, Yield, and Production, Crop Years 1919-1935," June 1936 (mimeographed).

U.S. D.A., "Agricultural Statistics," 1938-1940.

Fifteenth Census of U.S. 1930, Agriculture, Volume II (State and county figures).

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Table 60.- Value of Principal Farm Products, by Freight Rate Territories, 1939[1]
($50,000,000 to $499,999,999 group)

Product	Territory					United States
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	total
Chickens	149,579	58,938	93,482	29,790	23,267	355,056
Tobacco	36,802	245,826	2,729	-	-	285,357
Oats	86,433	14,765	143,349	16,387	15,975	276,909
Commercial truck crops	75,901	50,203	13,120	16,242	101,407	256,873
Potatoes	127,171	23,894	45,909	8,348	43,859	249,181
Sheep and lambs	23,256	8,292	39,933	12,521	64,877	148,879
Apples	68,780	7,543	6,659	1,100	27,843	111,925
Barley	14,231	1,462	69,037	3,510	23,462	111,702
Wool	11,358	2,218	12,024	19,089	39,635	84,324
Oranges	-	24,957	-	2,723	56,253	83,933
Turkeys	19,275	5,306	23,817	9,750	19,603	77,751
Soybeans for beans	53,642	3,878	9,091	878	-	67,489
Sweetpotatoes	6,111	35,855	1,276	10,093	1,080	54,415
	Percent of U.S. totals					
Chickens	42.13	16.60	26.33	8.39	6.55	100.00
Tobacco	12.90	86.15	.95	-	-	100.00
Oats	31.21	5.33	51.77	5.92	5.77	100.00
Commercial truck crops	29.55	19.54	5.11	6.32	39.48	100.00
Potatoes	51.04	9.59	18.42	3.35	17.60	100.00
Sheep and lambs	15.62	5.57	26.82	8.41	43.58	100.00
Apples	61.45	6.74	5.95	.98	24.88	100.00
Barley	12.74	1.31	61.81	3.14	21.00	100.00
Wool	13.47	2.63	14.26	22.64	47.00	100.00
Oranges	-	29.74	-	3.24	67.02	100.00
Turkeys	24.79	6.83	30.63	12.54	25.21	100.00
Soybeans for beans	79.48	5.75	13.47	1.30	-	100.00
Sweetpotatoes	11.23	65.89	2.34	18.55	1.99	100.00

1/ Preliminary.

Sources: Tables 47 and 50.

[fol. 5698] The acreage and production of oats could be materially increased in all territories as is evidenced by Table 61. The greatest aggregate increase in acreage amounting to 8.3 million acres (based on past acreages of oats) could be obtained in Western Trunk Line territory although acreages in Official territory could be increased nearly as much (6.8 million acres). The figures indicate that none of the other territories have ever been large producers of this crop and that their aggregate potential production (based on maximum acreages and maximum yields in the past) only amounts to 16 percent of the United States potential production.

Commercial Truck Crops

Commercial truck crops are grown principally in Official and Mountain-Pacific territories (29.55 percent and 39.48 percent, respectively, of the U. S. total value in 1939). Southern territory ranks in third place with 19.54 percent. Commercial truck crops in 1939 accounted for 4.77 percent of the value of all crops harvested. Their importance to particular areas is much greater than this percent would indicate, however, since they account for 13.50 percent of the value of crops harvested in Mountain-Pacific territory and 5.10 percent of the corps harvested in Official territory.

Potatoes

Official territory produced 44.13 percent of the total potato crop in 1939, or approximately twice the production of either Western Trunk Line or Mountain-Pacific territory. The regions of heaviest production lie north of the corn belt partly because the cooler climate is more favorable and partly because of the competition of corn which requires labor at the same time of year.[1]

Potatoes, being the most widely distributed crop in the United States,[2] could be grown on a much greater area in

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[1] Finch and Baker, op. cit., p. 69.

[2] Finch and Baker, op. cit., p. 67.

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Table 61. - Oats. Potential Production 1/ and Production in 1939, 2/
by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Bushels)			(1,000 bushels)		
Official	15,454	8,683	56.19	41.9	30.9	73.75	648,218	268,251	41.38
Southern	3,947	1,562	39.57	23.7	22.4	94.51	93,355	35,011	37.50
Western Trunk Line	27,010	18,750	69.42	41.5	28.4	68.43	1,121,647	532,100	47.44
Southwestern	4,002	2,672	66.77	35.3	20.3	57.51	141,215	54,301	38.45
Mountain-Pacific	2,279	1,403	61.56	41.5	33.9	81.69	94,593	47,552	50.27
United States	52,692	33,070	62.76	39.8	28.3	71.11	2,099,028	937,215	44.65
	Percent of total								
Official	29.33	26.26					30.88	28.62	
Southern	7.49	4.72					4.45	3.74	
Western Trunk Line	51.26	56.70					53.44	56.78	
Southwestern	7.60	8.08					6.73	5.79	
Mountain-Pacific	4.32	4.24					4.50	5.07	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of oats by freight rate territories was computed by applying the maximum yield (1879-1939) to the maximum acreage harvested (1879-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of acreage of oats harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., "Crops and Markets," Dec. 1939, p. 267.
U.S. D.A., B.A.E., "Revised Estimates of Oats Acreage, Yield, and Production, 1866-1929," July 1934 (mimeographed).
U.S. D.A., "Yearbook of Agriculture," 1932-1935.
U.S. D.A., "Agricultural Statistics," 1936-1939.
Fifteenth Census of U.S. 1930, Agriculture, Volume II (State and county figures).

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[fol. 5700] all territories than at present. The crop shows a preference, however, for light friable soils with high humus contents and for cool climates with moderate rainfall. Its commercial production is limited by distance from markets since its value in relation to bulk is rather small. Considering these factors, the figures presented in Table 62 on maximum acreage, yield, and production may be a fair indicator of what can be expected in the future if the production of potatoes is increased. Thus we see that Official territory is likely to continue as the leading producer and that Mountain-Pacific territory may lose its position in second place to Western Trunk Line territory. Southern and Southwestern territories (judging from this basis) are likely to remain low producers.

Apples

Official territory produced 62.69 percent of all apples [1] in 1939. Mountain-Pacific territory ranks in second place with 24.99 percent. Production of apples is limited by both climatic and economic conditions. According to Finch and Baker:

> "The production of apples in commercial quantities does not extend much to the south of the line of 79° mean summer (June, July, and August) temperature, only a few trees, planted mostly for home consumption, being found below this line. The northward distribution ends approximately at the mean winter (December, January, and February) isotherm of 13°, and the acreage is thin beyond the winter isotherm of 20°, except in Vermont, New Hampshire, and Maine, where the moister weather lessens the injury of the dry winter winds. The effect of the cold, desiccating northwestern winds is apparent on the map as far south as central Illinois and northwestern Indiana, while the influence of Lake Michigan in raising both the temperature and moisture content of the air is evident not only on the

[1] Total production (not reported for 1939) was estimated on the basis of the ratio of average total production for 1928-1937 to average commercial production for the same period.

Table 62. - Potatoes. Potential Production[1] and Production in 1939[2] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Bushels)			(1,000 bushels)		
Official	2,257	1,263	55.22	159	127	79.87	364,006	160,645	44.13
Southern	410	334	81.46	115	94	81.74	46,994	31,222	66.44
Western Trunk Line	1,747	875	50.09	131	92	70.23	228,331	80,855	35.41
Southwestern	209	149	71.29	87	66	75.86	18,196	9,767	53.68
Mountain-Pacific	538	406	75.46	215	201	93.49	115,411	81,527	70.64
United States	5,191	3,027	58.31	149	120	80.54	772,938	364,016	47.10
	Percent of total								
Official	44.06	41.73					47.09	44.13	
Southern	7.90	11.03					6.08	8.58	
Western Trunk Line	33.66	28.91					29.54	22.21	
Southwestern	4.03	4.92					2.36	2.68	
Mountain-Pacific	10.35	13.41					14.93	22.40	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of potatoes by freight rate territories was computed by applying the maximum yield (1879-1939) to the maximum acreage harvested (1879-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of acreage of potatoes harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., B.A.E., "Revised Estimates of Potato Acreage, Yield, and Production, 1866-1929," Aug. 1935 (mimeographed).
U.S. D.A., "Yearbook of Agriculture," 1932-1935.
U.S. D.A., "Agricultural Statistics," 1936-1940.
Fifteenth Census of U.S., 1930, Agriculture, Volume I. (State and county figures).

5701

[fol. 5702] Michigan but also in lesser degree upon the Wisconsin shore. Very few apples are grown in the Great Plains area beyond the line of 18 inches rainfall during the six growing months, April to September, inclusive, except where irrigation is practiced."[1]

Within this wide range of territory the commercial production of apples is limited by market demand.

Sheep

Sheep and lambs and wool are produced chiefly in Mountain-Pacific territory (44.40 percent and 48.40 percent, respectively), probably due to the vast amount of rangeland which can be best utilized by grazing sheep. Other significant amounts of sheep and wool are produced in Western Trunk Line and Official territories, seeming to follow, in general fashion, the production of the principal feed crops.

Other

Soybeans are grown principally in Official territory (81.45 percent of U. S. total in 1939), and have become important as a crop only within the past fifteen years. Their use in manufacturing seems to indicate a much greater expansion in acreage and production in the future. Western Trunk Line territory ranks second with 13.59 percent of the total.

The remaining 12 crops for which potential production was computed (barley, rye, buckwheat, rice, grain sorghums, sweet sorghums, peanuts, flaxseed, sugarcane for sugar, sugarcane for syrup, sugar beets, and sweetpotatoes) are not discussed individually since none of these crops amounted to as much as 2½ percent of the total farm value of crops harvested in 1939. The tabular comparisons of potential figures with 1939 figures, however, are presented in the tables which immediately follow.

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[1] Ibid., p. 77.

Table 63.- Barley. Potential Production[1/] and Production in 1939[2/] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Bushels)			(1,000 bushels)		
Official	2,170	1,032	47.56	32.6	27.5	84.36	70,785	28,426	40.16
Southern	137	124	90.51	25.3	20.3	80.24	3,469	2,516	72.53
Western Trunk Line	11,476	8,757	76.31	29.1	20.5	70.45	334,330	179,722	53.76
Southwestern	599	575	95.99	25.6	15.7	61.33	15,324	9,003	58.75
Mountain-Pacific	2,644	2,112	79.88	34.2	26.8	78.36	90,513	56,631	62.57
United States	17,026	12,600	74.00	30.2	21.9	72.52	514,421	276,298	53.71
	Percent of total								
Official	12.74	8.19					13.76	10.29	
Southern	0.81	0.99					0.67	0.91	
Western Trunk Line	67.40	69.50					64.99	65.05	
Southwestern	3.52	4.56					2.98	3.26	
Mountain-Pacific	15.53	16.76					17.60	20.49	
United States	100.00	100.00					100.00	100.00	

1/ Potential barley production by freight rate territories was computed by applying the maximum yield (1879-1939) to the maximum acreage harvested (1879-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of barley acreage harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., "Crops and Markets," Dec. 1939, p. 269.
U.S. D.A., B.A.E., "Revised Estimates of Barley Acreage, Yield, and Production, 1866-1929," Feb. 1935 (mimeographed).
U.S. D.A., "Yearbook of Agriculture," 1932-1935.
U.S. D.A., "Agricultural Statistics," 1936-1939.
Fifteenth Census of U.S., 1930, Agriculture, Volume II (State and county figures).

5703

Table 64.- Rye. Potential Production[1/] and Production in 1939[2/] by Freight Rate Territories.

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Bushels)			(1,000 bushels)		
Official	2,854	621	21.76	16.5	13.1	79.39	46,965	8,130	17.31
Southern	284	165	58.10	11.6	8.0	68.97	3,293	1,313	39.87
Western Trunk Line	5,629	2,807	49.86	17.9	9.8	54.75	100,609	27,608	27.44
Southwestern	90	69	76.67	13.2	8.5	64.39	1,185	587	49.54
Mountain-Pacific	347	149	42.90	16.7	10.8	64.67	5,812	1,611	27.72
United States	9,204	3,811	41.41	17.2	10.3	59.88	157,864	39,249	24.86
	Percent of total								
Official	31.00	16.29					29.75	20.71	
Southern	3.08	4.33					2.09	3.35	
Western Trunk Line	61.16	73.66					63.73	70.34	
Southwestern	0.98	1.81					0.75	1.50	
Mountain-Pacific	3.78	3.91					3.68	4.10	
United States	100.00	100.00					100.00	100.00	

1/ Potential rye production by freight rate territories was computed by applying the maximum yield (1879-1939) to the maximum acreage harvested (1879-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of rye acreage harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., "Crops and Markets," Dec. 1939, p. 269.
U.S. D. A., B.A.E., "Revised Estimates of Rye Acreage, Yield, and Production, 1866-1929," October 1935, (mimeographed).
U.S. D.A., "Yearbook of Agriculture," 1932-1935.
U.S. D.A., "Agricultural Statistics," 1936-1939.
Fifteenth Census of U.S., 1930, Agriculture, Volume II (State and county figures).

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Table 65.- Buckwheat. Potential Production[1] and Production in 1939[2] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Bushels)			(1,000 bushels)		
Official	995	327	32.86	21.4	15.6	72.90	21,298	5,097	23.93
Southern	43	18	41.86	15.9	12.7	79.87	690	228	33.04
Western Trunk Line	277	34	12.27	14.9	12.2	81.88	4,137	414	10.01
Southwestern	-	-	-	-	-	-	-	-	-
Mountain-Pacific	-	-	-	-	-	-	-	-	-
United States	1,315	379	28.82	19.9	15.1	75.88	26,125	5,739	21.97
	Percent of total								
Official	75.64	86.28					81.52	88.81	
Southern	3.31	4.75					2.64	3.97	
Western Trunk Line	21.05	8.97					15.84	7.22	
Southwestern	-	-					-	-	
Mountain-Pacific	-	-					-	-	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of buckwheat by freight rate territories was computed by applying the maximum yield (1879-1939) to the maximum acreage harvested (1879-1939) for each State comprising the territory. Data for States divided by freight rate territory boundaries were apportioned on the basis of buckwheat acreage harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., "Crops and Markets," Dec. 1939, p. 273.
U.S. D.A., B.A.E., "Revised Estimates of Buckwheat Acreage, Yield, and Production, 1866-1929," July 1934 (mimeographed).
U.S. D.A., "Yearbook of Agriculture," 1932-1935.
U.S. D.A., "Agricultural Statistics," 1936-1939.
Fifteenth Census of U.S., 1930, Agriculture, Volume II (State and county figures).

5705

5706

Table 66.- Rice. Potential Production[1/] and Production in 1939[2/] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Bushels)			(1,000 bushels)		
Official	-	-	-	-	-	-	-	-	-
Southern 3/	64	6	-	32.8	43.0	-	2,086	262	-
Western Trunk Line	10	-	-	75.0	-	-	750	-	-
Southwestern	1,147	913	79.60	49.6	47.1	94.96	56,899	43,044	75.65
Mountain-Pacific	162	120	74.07	76.4	75.0	98.17	12,377	9,000	72.72
United States	1,383	1,039	75.13	52.1	50.3	96.55	72,112	52,306	72.53
	Percent of total								
Official	-	-					-	-	
Southern	4.60	0.58					2.89	0.50	
Western Trunk Line	.72	-					1.04	-	
Southwestern	82.97	87.87					78.91	82.29	
Mountain-Pacific	11.71	11.55					17.16	17.21	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of rice by freight rate territories was computed by applying the maximum yield (1904-1939) to the maximum acreage harvested (1904-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of acreage of rice harvested in 1929 (Census county figures).

2/ Preliminary.

3/ Percents not computed because data for 1939 are incomplete, figures being shown for Louisiana only. This fact accounts for the apparent impossibility in the yield column; namely, that the 1939 yield per acre for Southern Territory is higher than the maximum yield per acre for any year, including 1939. The maximum yield for Louisiana is 46.0 pounds in 1916.

Sources:

U.S. D.A., "Crops and Markets," Dec. 1939, p. 266.
U.S. D.A., B.A.E., "Disposition of Rice, Crop Years 1909-1936, by States," March 1939 (mimeographed).
U.S. D.A., "Agricultural Statistics," 1939.
U.S. D.A., "Yearbook of Agriculture," 1904-1908, 1920-1932.
Fifteenth Census of U.S., 1930, Agriculture, Volume II (State and county figures).

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Table 67.- Grain Sorghums for All Purposes. Potential Production[1/] and Production in 1939[2/] by Freight Rate Territories

Territory	Acreage harvested			Yield per Acre[2/]			Production[2/]		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Bushels)			(1,000 bushels)		
Official	-	-	-	-	-	-	-	-	-
Southern	-	-	-	-	-	-	-	-	-
Western Trunk Line ..	3,529	2,843	80.56	16.4	9.3	56.71	57,842	26,410	45.66
Southwestern	6,234	4,722	75.75	18.8	10.2	54.26	117,432	48,297	41.09
Mountain-Pacific	585	490	83.76	24.4	17.2	70.49	14,290	8,435	59.03
United States	10,348	8,055	77.84	18.3	10.3	56.28	189,564	83,102	43.84
	Percent of total								
Official	-	-					-	-	
Southern	-	-					-	-	
Western Trunk Line...	34.10	35.30					30.51	31.78	
Southwestern	60.25	58.62					61.95	58.07	
Mountain-Pacific	5.65	6.08					7.54	10.15	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of grain sorghums by freight rate territories was computed by applying the maximum yield (1924-1939), including grain equivalent on forage acreage, to the maximum acreage harvested (1924-1939) for each State comprising the territory. Data for States divided by territory boundaries were apportioned on the basis of acreage of grain sorghums harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., B.A.E., "General Crop Revisions, Crop Years 1924-1935, Acreage, Yield and Production, by States," June 1936 (mimeographed).

U.S. D.A., "Agricultural Statistics," 1938-1940.

Fifteenth Census of U.S., 1930, Agriculture, Volume II (State and county figures).

5707

18105

Table 68. - Sweet Sorghums for Forage and Hay.[1] Potential Production[2] and Production in 1939, [3] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Tons)			(1,000 tons)		
Official	33	30	90.91	[4]/2.45	[4]/2.47	[4]/100.00	81	74	91.36
Southern	381	244	64.04	2.15	1.80	83.72	821	440	53.59
Western Trunk Line	3,416	3,342	97.83	2.41	1.69	70.12	8,244	5,651	68.55
Southwestern	2,268	2,212	97.53	1.68	1.11	66.07	3,802	2,455	64.57
Mountain-Pacific	53	47	88.67	1.68	0.98	58.33	89	46	51.69
United States	6,151	5,875	95.51	2.12	1.48	69.81	13,037	8,666	66.47
	Percent of total								
Official	0.54	0.51					0.62	0.85	
Southern	6.19	4.15					6.30	5.08	
Western Trunk Line	55.54	56.89					63.21	65.21	
Southwestern	36.87	37.65					29.16	28.33	
Mountain-Pacific	0.86	0.80					0.68	0.53	
United States	100.00	100.00					100.00	100.00	

1/ Not included in "all tame hay."

2/ Potential production of sweet sorghums by freight rate territories was computed by applying the maximum yield (1924-1939) to the maximum acreage harvested (1924-1939) for each state comprising the territory. Data for states divided by territory boundaries were apportioned on the basis of acreage of sorghums cut for silage in 1929 (Census county figures).

3/ Preliminary.

4/ The apparent impossibility (that yield per acre for 1939 is greater than the maximum yield for any year, including 1939) is due to a weighting of state yields inherent in the method of computation. The only states in Official Territory for which figures are reported are Illinois and Virginia. Since maximum data for Illinois coincide with 1939 figures (acreage 28,000, yield 2.5 tons), and, since maximum data for Virginia (acreage 7,000, yield 2.0 tons) are considerably greater than 1939 figures (acreage 3,000, yield 1.67 tons); consequently, Virginia has less weight in the computation of 1939 yield for Official Territory than in the computation of the maximum yield for Official Territory.

Sources:

U.S. D.A., B.A.E., "General Crop Revisions, Crop Years 1924-1935, Acreage, Yield and Production by States," June 1936 (mimeographed).

U.S. D.A., "Crops and Markets," Dec. 1937, 1938, and 1939.

Fifteenth Census of U. S., 1930, Agriculture, Volume II (state and county figures).

Table 69. - Peanuts.3/ Potential Production1/ and Production in 1939[2]
by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Pounds)			(1,000 pounds)		
Official	79	79	100.00	1,225	1,175	95.92	96,444	92,512	95.92
Southern	2,396	2,355	98.28	859	609	70.90	2,058,081	1,434,231	69.69
Western Trunk Line	-	-	-	-	-	-	-	-	-
Southwestern	652	571	87.58	676	427	63.17	440,630	243,547	55.27
Mountain-Pacific	-	-	-	-	-	-	-	-	-
United States	3,127	3,005	96.10	830	589	70.96	2,595,155	1,770,290	68.22
	Percent of total								
Official	2.52	2.63					3.72	5.22	
Southern	76.63	78.37					79.30	81.02	
Western Trunk Line	-	-					-	-	
Southwestern	20.85	19.00					16.98	13.76	
Mountain-Pacific	-	-					-	-	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of peanuts by freight rate territories was computed by applying the maximum yield (1919-1939) to the maximum acreage harvested (1919-1939) for each state comprising the territory. Data for states divided by territory boundaries were apportioned on the basis of production of peanuts in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., "Crops and Markets," Dec. 1939, p. 277.

U.S. D.A., B.A.E., "Peanuts, Revised Estimates, Acreage, Yield, Production, and Disposition by States and Estimated Commercial Production by Areas, 1919-1938," May 1939 (mimeographed).

Fifteenth Census of U.S., 1930, Agriculture, Volume II (state and county figures).

3/ Figures are for equivalent acreage and production for all purposes as contrasted with 1939 figures presented previously in this report which are for peanuts picked and threshed.

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Table 70. - Flaxseed. Potential Production[1] and Production in 1939[2] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Bushels)			(1,000 bushels)		
Official	25	1.8	7.20	13.4	8.9	66.42	327	16	4.89
Southern	-	-	-	-	-	-	-	-	-
Western Trunk Line	5,026	2,001.2	39.82	12.5	8.7	69.60	62,649	17,466	27.88
Southwestern	18	18.0	100.00	11.5	11.5	100.00	207	207	100.00
Mountain-Pacific	674	263.0	39.02	15.0	10.0	66.67	10,089	2,641	26.18
United States	5,743	2,284.0	39.77	12.8	8.9	69.53	73,272	20,330	27.75
	Percent of total								
Official	0.43	0.08					0.45	0.08	
Southern	-	-					-	-	
Western Trunk Line	87.52	87.62					85.50	85.91	
Southwestern	.31	.79					.28	1.02	
Mountain-Pacific	11.74	11.51					13.77	12.99	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of flaxseed by freight rate territories was computed by applying the maximum yield (1889-1939) to the maximum acreage harvested (1889-1939) for each state comprising the territory. Data for states divided by territory boundaries were apportioned on the basis of acreage of flax harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., "Crops and Markets," Dec. 1939, p. 273.
U.S. D.A., B.A.E., "Revised Estimates of Flaxseed * * * Acreage and Yield per Acre, 1889-1929," July 1936 (mimeographed).
U.S. D.A., "Yearbook of Agriculture," 1932-1935.
U.S. D.A., "Agricultural Statistics," 1936-1939.
U.S. D.A., "Yearbook of Agriculture," 1926, p. 871 (data for Colorado).
Fifteenth Census of U.S., 1930, Agriculture, Volume II (state and county figures).

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Table 71. - Sugarcane for Sugar.[1] Potential Production[2] and Production in 1939,[3] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Tons)			(1,000 tons)		
Official	-	-	-	-	-	-	-	-	-
Southern	41	35	85.37	30.4	29.5	97.04	1,254	1,037	82.70
Western Trunk Line	-	-	-	-	-	-	-	-	-
Southwestern	253	223	88.14	21.7	21.4	98.62	5,487	4,761	86.77
Mountain-Pacific	-	-	-	-	-	-	-	-	-
United States	294	258	87.76	22.9	22.5	98.25	6,741	5,798	86.01
	Percent of total								
Official	-	-					-	-	
Southern	14.03	13.60					18.60	17.89	
Western Trunk Line	-	-					-	-	
Southwestern	85.97	86.40					81.40	82.11	
Mountain-Pacific	-	-					-	-	
United States	100.00	100.00					100.00	100.00	

1/ Excluding cane for seed.

2/ Potential production of sugarcane for sugar by freight rate territories was computed by applying the maximum yield (1924-1939) to the maximum acreage harvested (1924-1939) for each state comprising the territory. Data for Louisiana were apportioned to territories on the basis of acreage of sugarcane harvested for sugar in 1929 (Census county figures).

3/ Preliminary.

Sources:

U.S. D.A., B.A.E., "General Crop Revisions, Crop Years 1924-1935, Acreage, Yield and Production by States," June 1936 (mimeographed).

U.S. D.A., "Agricultural Statistics," 1939, 1940.

Fifteenth Census of U.S., 1930, Agriculture, Volume II (state and county figures).

Table 72. - Sugarcane for Syrup. Potential Production[1] and Production in 1939,[2] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Gallons)			(1,000 gallons)		
Official	-	-	-	-	-	-	-	-	-
Southern	137	114	83.21	179	150	83.80	24,581	17,051	69.37
Western Trunk Line	-	-	-	-	-	-	-	-	-
Southwestern	48	31	64.58	277	253	91.34	13,311	7,858	59.03
Mountain-Pacific	-	-	-	-	-	-	-	-	-
United States	185	145	78.38	205	172	83.90	37,892	24,909	65.74
	Percent of total								
Official	-	-					-	-	
Southern	74.05	78.62					64.87	68.45	
Western Trunk Line	-	-					-	-	
Southwestern	25.95	21.38					35.13	31.55	
Mountain-Pacific	-	-					-	-	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of sugarcane for syrup by freight rate territories was computed by applying the maximum yield (1924-1939) to the maximum acreage harvested (1924-1939) for each state comprising the territory. Data for Louisiana were apportioned to territories on the basis of acreage of sugarcane harvested for syrup in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., B.A.E., "General Crop Revisions, Crop Years 1924-1935, Acreage, Yield and Production by States," June 1936 (mimeographed).

U.S. D.A., "Agricultural Statistics," 1938-1940.

Fifteenth Census of U. S., 1930, Agriculture, Volume II (state and county figures).

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Table 73. - Sugar Beets. Potential Production[1] and Production in 1939[2] by Freight Rate Territories.

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Tons)			(1,000 tons)		
Official	209	166	79.43	10.0	8.4	84.00	2,101	1,391	66.21
Southern	-	-	-	-	-	-	-	-	-
Western Trunk Line	305	187	61.31	14.7	10.9	74.15	4,483	2,045	45.62
Southwestern	-	-	-	-	-	-	-	-	-
Mountain-Pacific	498	443	88.96	15.2	13.8	90.79	7,546	6,093	80.74
United States 3/	1,012	796	78.66	14.0	11.7	83.57	14,130	9,529	67.44
	Percent of total								
Official	20.65	20.86					14.87	14.60	
Southern	-	-					-	-	
Western Trunk Line	30.14	23.49					31.73	21.46	
Southwestern	-	-					-	-	
Mountain-Pacific	49.21	55.65					53.40	63.94	
United States 3/	100.00	100.00					100.00	100.00	

1/ Potential production of sugar beets by freight rate territories was computed by applying the maximum yield (1924-1939) to the maximum acreage harvested (1924-1939) for each state comprising the territory. Data for states divided by territory boundaries were apportioned on the basis of acreage of sugar beets harvested in 1929 (Census county figures).

2/ Preliminary.

3/ Excluding "other states", for which, in 1939, the following data are reported: Acreage harvested, 121,000; yield per acre, 103 tons; production, 1,244,000 tons.

Sources:

U.S. D.A., B.A.E., Crop Reporting Board, "General Crop Revisions, Crop Years 1924-1935, Acreage, Yield, and Production by States," June 1936 (mimeographed).
U.S. D.A., "Agricultural Statistics," 1938-1940.
Fifteenth Census of U.S., 1930, Agriculture, Volume II (state and county figures).

Table 74. - Sweetpotatoes. Potential Production[1/] and Production in 1939[2/] by Freight Rate Territories

Territory	Acreage harvested			Yield per acre			Production		
	Maximum	1939	Percent of maximum	Maximum	1939	Percent of maximum	Potential	1939	Percent of potential
	(1,000 acres)			(Bushels)			(1,000 bushels)		
Official	105	63	60.00	154.8	134.8	87.08	16,247	8,492	52.27
Southern	660	567	85.91	108.5	85.0	78.34	71,684	48,187	67.22
Western Trunk Line	25	19	76.00	126.2	85.0	67.35	3,155	1,615	51.19
Southwestern	307	203	66.12	106.3	65.0	61.15	32,593	13,185	40.45
Mountain-Pacific	18	10	55.56	177.9	120.0	67.45	3,202	1,200	37.48
United States	1,115	862	77.31	113.8	84.3	74.0	126,881	72,679	57.28
	Percent of total								
Official	9.42	7.31					12.80	11.69	
Southern	59.19	65.78					56.50	66.30	
Western Trunk Line	2.24	2.20					2.49	2.22	
Southwestern	27.53	23.55					25.69	18.14	
Mountain-Pacific	1.62	1.16					2.52	1.65	
United States	100.00	100.00					100.00	100.00	

1/ Potential production of sweetpotatoes by freight rate territories was computed by applying the maximum yield (1879-1939) to the maximum acreage harvested (1879-1939) for each state comprising the territory. Data for states divided by territory boundaries were apportioned on the basis of acreage of sweetpotatoes harvested in 1929 (Census county figures).

2/ Preliminary.

Sources:

U.S. D.A., B.A.E., "Revised Estimates of Sweet Potato Acreage, Yield per Acre, and Production, 1868-1923," Feb. 1937 (mimeographed)
U.S. D.A., "Yearbook of Agriculture," 1926-1937.
U.S. D.A., "Agricultural Statistics," 1938-1940.
Fifteenth Census of U. S., 1930, Agriculture, Volume II (state and county figures).

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[fol. 5715] *Diversification of Crops*

The number of major crops in each territory is important insofar as it determines to what extent each territory is dependent upon particular crops for its value of production. Table 47 shows that Official territory has only 2 crops which produce more than 10 percent of the total value of the territory. These are corn (37.78 percent) and tame hay (16.29 percent) and the two together have a greater value than all other crops. Eight crops produce between 1 and 10 percent each of the total value. These eight crops plus the two major crops account for 93.45 percent of the farm value as of 1939.

Southern territory has three major crops; cotton, 25.45 percent; tobacco, 21.75 percent; and corn, 20.02 percent of the total. These 3 crops account for approximately two-thirds of the farm value harvested in 1939. In addition, there are 10 crops with from 1 to 10 percent of the total which account for an additional 26.97 percent of the total value.

Corn is of such major importance to Western Trunk Line territory that it dwarfs all other crops by comparison since it accounts for 41.93 percent of the total value. Three other crops, wheat, oats, and tame hay, account for another 35.70 percent, hence the 4 major crops account for over 75 per cent of the total. Seven other crops each have more than 1 percent of the territory total value.

The agriculture of Southwestern territory is dominated by cotton production which accounts for 44.71 percent of the value produced in 1939. Three cereal crops, corn, wheat, and rice, account for another 27.88 percent and there are 8 other crops which each have over 1 percent of the territory total.

The farm value produced in Mountain-Pacific territory is widely distributed, since no crop accounts for more than 16.13 percent of the territory total. Three crops, tame hay, wheat, and commercial truck crops, account for 43.40 percent. There are 15 other crops which each account for more than 1 percent of the total, chief among which are, in the order of their importance, oranges, cotton, and potatoes.

[fol. 5716] When the figures on value produced are arranged according to major groups of crops,[1] they reveal more clearly the dependence of certain territories on particular types of crops. For example, Table 75 shows that, on the basis of 1939 value figures, Southern territory depends on special crops for 48.17 percent of its production. Of this percent 25.45 is cotton and 21.75 is tobacco. It also reveals that cereal crops are of greatest importance to Official territory (53.17 percent of the territory total) and Western Trunk Line territory (74.87 percent). Cereal and hay crops together make up 89 percent of the value produced in Western Trunk Line territory. Southwestern territory produces principally special crops, which make up 47.25 percent of the territory total. Of this percent (47.25) 44.71 is cotton. Mountain-Pacific territory produces mainly fruits and nuts, followed in order of importance by cereal crops, potatoes and truck crops, and hay and seed crops. Its value of production is thus fairly evenly distributed over several major groups of crops. Its major crop, fruits and nuts, is not grown generally throughout the United States, however, which tends to discount its position as the territory with the most widely distributed production (as shown by this method).

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[1] The crops studied in this report are grouped as follows:

Cereal crops—corn, wheat, oats, barley, rye, buckwheat, rice, and grain sorghums;

Hay and seed crops—tame and wild hay, sweet sorghums, alfalfa seed, red clover seed, and lespedeza seed;

Annual legumes—dry edible beans, dry field peas, soy beans, cowpeas, peanuts, and velvet beans;

Special crops—flaxseed, tobacco, cotton, sugar-cane and sugar beets;

Potatoes and truck crops—potatoes, sweet potatoes, and commercial truck crops; and

Fruits and nuts—strawberries, cranberries, apples, peaches, pears, grapes, cherries, plums and prunes, oranges, grapefruit, lemons, and pecans.

(Here follows 1 Photolithograph, side folio 5717)

Table 75. - Farm Value of Principal Groups of Crops, by Freight Rate Territories, 1939 1/

Crop	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Dollars)					
Cereal crops	791,954	260,522	1,025,091	230,106	164,456	2,472,129
Hay and seed crops	255,635	88,500	193,345	46,771	138,959	723,210
Annual legumes	75,082	53,358	14,334	9,915	29,809	182,498
Special crops	45,172	544,515	63,000	306,694	80,183	1,039,564
Potatoes and truck crops	209,183	109,952	60,305	34,683	146,346	560,469
Fruits and nuts	112,412	73,566	13,113	20,913	191,634	411,638
All crops	1,489,438	1,130,413	1,369,188	649,082	751,387	5,389,508
	Percent of territory totals					
Cereal crops	53.17	23.04	74.87	35.45	21.89	45.87
Hay and seed crops	17.16	7.83	14.12	7.21	18.49	13.42
Annual legumes	5.04	4.72	1.05	1.53	3.97	3.38
Special crops (cash crops)	3.03	48.17	4.60	47.25	10.67	19.29
Potatoes, sweetpotatoes, and commercial truck crops	14.05	9.73	4.40	5.34	19.48	10.40
Fruits and nuts	7.55	6.51	.96	3.22	25.50	7.64
All crops	100.00	100.00	100.00	100.00	100.00	100.00

1/ Preliminary.

Sources:

U.S.D.A., "Crops and Markets," Dec. 1939.
U.S.D.A., "Agricultural Statistics," 1940.
U.S.D.A., "Farm Production, Farm Disposition, and Value of Principal Field Crops, 1937-1939, by States," April 1940 (mimeographed).
Fifteenth Census of U. S., 1930, Agriculture, Volume II (state and county figures).

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[fol. 5718] Table 76 shows a comparison of territories on the basis of how closely the crops grown in each territory conform to the national distribution of crops. In order to make this comparison, the acreage of each crop harvested in each territory was expressed as a percent of the total acreage of all crops harvested in the territory in 1939. The deviation of each territory from the national average was computed by subtracting these percents from the percents showing distribution of acreage by crops for the United States and by adding without regard to positive or negative signs. Hence, Western Trunk Line territory, with the smallest total deviation, raises crops which conform more closely to the United States average (judged from the standpoint of distribution of acreage) than any other territory. Official territory is next, followed in order by Southwestern, Southern, and Mountain-Pacific territories.

Table 76.--Distribution of the Acreage of Crops Harvested within Freight Rate Territories, 1939 1/

Crop	United States		Official		Southern		Western Trunk Line		Southwestern		Mountain-Pacific	
	1,000 acres	Percent of all crops	Percent of all crops	Deviation from U.S.	Percent of all crops	Deviation from U.S.	Percent of all crops	Deviation from U.S.	Percent of all crops	Deviation from U.S.	Percent of all crops	Deviation from U.S.
Corn	88,803	26.93	30.82	+ 3.89	41.33	+ 14.40	26.61	- 0.32	20.68	- 6.25	2.59	- 24.34
Tame hay	58,347	17.69	30.60	+ 12.91	15.36	- 2.33	13.35	- 4.34	6.36	- 11.33	27.88	+ 10.19
Wheat	53,696	16.28	11.52	- 4.76	3.15	- 13.13	21.68	+ 5.40	14.88	- 1.40	30.52	+ 14.24
Oats	33,070	10.03	12.06	+ 2.03	2.96	- 7.07	14.61	+ 4.58	5.58	- 4.45	4.87	- 5.16
Cotton	23,785	7.21	.01	- 7.20	17.62	+ 10.41	.29	- 6.92	28.19	+ 20.98	2.11	- 5.10
Barley	12,600	3.82	1.43	- 2.39	.23	- 3.59	6.82	+ 3.00	1.20	- 2.62	7.34	+ 3.52
Wild hay	10,898	3.30	.33	- 2.97	.55	- 2.75	5.98	+ 2.68	1.90	- 1.40	6.21	+ 2.91
Grain sorghums	8,055	2.44	-	- 2.44	-	- 2.44	2.22	- .22	9.86	+ 7.42	1.70	- .74
Sweet sorghums	5,875	1.78	.04	- 1.74	.46	- 1.32	2.60	+ .82	4.62	+ 2.84	.16	- 1.62
Fruits and nuts	5,344	1.62	2.54	+ .92	1.89	+ .27	.28	- 1.34	.78	- .84	6.24	+ 4.62
Soybeans	4,226	1.28	4.40	+ 3.12	.65	- .63	.49	- .79	.18	- 1.10	-	- 1.28
Rye	3,811	1.16	.86	- .30	.31	- .85	2.19	+ 1.03	.14	- 1.02	.52	- .64
Potatoes	3,027	.92	1.75	+ .83	.63	- .29	.68	- .24	.31	- .61	1.41	+ .49
Commercial truck crops	2,852	.87	1.37	+ .50	1.06	+ .19	.20	- .67	.74	- .13	2.40	+ 1.53
Velvetbeans	2,444	.74	-	- .74	4.55	+ 3.81	-	- .74	.09	- .65	-	- .74
Flaxseed	2,284	.69	2/	- .69	-	- .69	1.56	+ .87	.04	- .65	.91	+ .22
Tobacco	2,014	.61	.27	- .34	.42	+ 2.81	.01	- .60	-	- .61	-	- .61
Peanut	1,859	.56	.11	- .45	2.65	+ 2.09	-	- .56	.80	+ .24	-	- .56
Beans, dry edible	1,554	.47	.84	+ .37	-	- .47	.20	- .27	-	- .47	2.39	+ 1.92
Cowpeas	1,365	.41	.16	- .25	1.65	+ 1.24	.02	- .39	.75	+ .34	-	- .41
Rice	1,039	.32	-	- .32	1.01	- .31	-	- .32	1.91	+ 1.59	.42	+ .10
Sweetpotatoes	862	.26	.09	- .17	1.07	+ .81	.01	- .25	.42	+ .16	.04	- .22
Sugar beets	796	.24	.23	- .01	-	- .24	.15	- .09	-	- .24	1.54	+ 1.30
Buckwheat	379	.12	.45	+ .33	.03	- .09	.03	- .09	-	- .12	-	- .12
Sugarcane for sugar	258	.08	-	- .08	.07	- .01	-	- .08	.47	+ .39	-	- .08
Peas, dry field	204	.06	.01	- .05	-	- .06	.01	- .05	-	- .06	.66	+ .60
Strawberries	194	.06	.08	+ .02	.13	+ .07	.01	- .05	.04	- .02	.09	+ .03
Sugarcane for syrup	145	.04	-	- .04	.22	+ .18	-	- .04	.06	+ .02	-	- .04
Cranberries	28	.01	.03	+ .02	-	- .01	2/	- .01	-	- .01	2/	- .01
All principal crops	329,814	100.00	100.00		100.00		100.00		100.00		100.00	
Total deviation from U.S.				49.88		72.56		36.76		67.96		83.34
No. of crops over U.S. average				11		11		7		9		13
No. of crops under U.S. average				18		18		22		20		16

1/ Preliminary.
2/ Less than .005 percent.

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[fol. 5720] Chapter V

Rate Territory Distribution of Forest Resources

Forest Regions

In the description of physical conditions required for forests (moisture, temperature, topography, and soil), a Department of Agriculture Bulletin states that "trees present an exceptionally large and exposed extent of surface to evaporation; hence forests, in general, are more restricted than crops in the matter of moisture requirements. But forests are less restricted by low temperature, and are scarcely restricted at all by topographic and soil conditions. * * * In the matter of resistance to low temperature some forest trees, especially the spruce and fir, exceed any of the crops. Whereas 9,000 to 10,000 feet is the upper limit of crop production in Colorado, the timber extends upward to 11,000 and 12,000 feet. The mean summer temperature at this altitude is about 48° F. * * * with reference to stony or rough land and sandy soils in humid areas, forests show almost perfect adaption. Mountain slopes will produce almost as much timber as valley bottoms having the same soil, and the land meanwhile is being protected from erosion. Likewise relatively infertile sand will normally produce as many feet of pine timber annually as the most fertile land will of hardwood. For these reasons the mountain areas and the sandy lands of the United States, which jointly amount to about 400 million acres, are devoted largely to forest." [1]

"Different kinds of species of trees are found in natural association or mixtures and prevail in different portions of the United States. This is largely the result of varying conditions of temperature and rainfall or snowfall, and secondarily, of soil conditions." [2] According to Mattoon, [fol. 5721] there are six natural forest regions in continen-

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[1] O. E. Baker, Senior Agriculture Economist, Bureau of Agricultural Economics, "A Graphic Summary of Physical Features and Land Utilization in the United States," U. S. D.A. Misc. Publication No. 260, May 1937, pp. 20-21.

[2] Wilbur R. Mattoon, Extension Forester, [U. S.] Forest Service, "Forest Trees and Forest Regions of the United States," U. S. D. A., Misc. Publication No. 217, September 1936, p. 33.

tal United States: northern, central hardwood, southern, tropical, Rocky Mountain, and Pacific Coast region. (See Map 14). "Most of the trees of a given forest region are different from those in the others, yet a considerable number are found in at least two and a few in three regions, especially in the eastern part of the United States where the large regions integrade gradually. This difference in the predominance of various species is rather marked in the two forest regions of the western portion of the United States, divided partly at least by the extensive and nearly treeless interior basis extending from southeast Washington south to Mexico."[1]

The northern forest region covers most of New England and New York, extends southward over the Allegheny Plateau and Appalachian Mountains to northern Georgia, and in the Lake States most of Michigan, Wisconsin, and Minnesota. This region "is characterized by the predominance of northern white pine, eastern hemlock, red and white spruces, gray paper, sweet, and yellow birches, beech, sugar maple, basswoods, and northern red and scarlet oaks. Each of these species varies in abundance in different parts of the region, and most of them are absent in some places. * * * The southern extension of the region is characterized by an abundance of oaks of various kinds, chestnut, black gum, yellow poplar, cucumber tree, black locust, and southern balsam fir."[2]

The northern forest region "was the first land in the United States to be logged and it now contains only insignificant areas of virgin timber. Cutting is going on mostly in small-sized timber which produces small dimension lumber * * *, pulpwood, and fuel wood."[2]

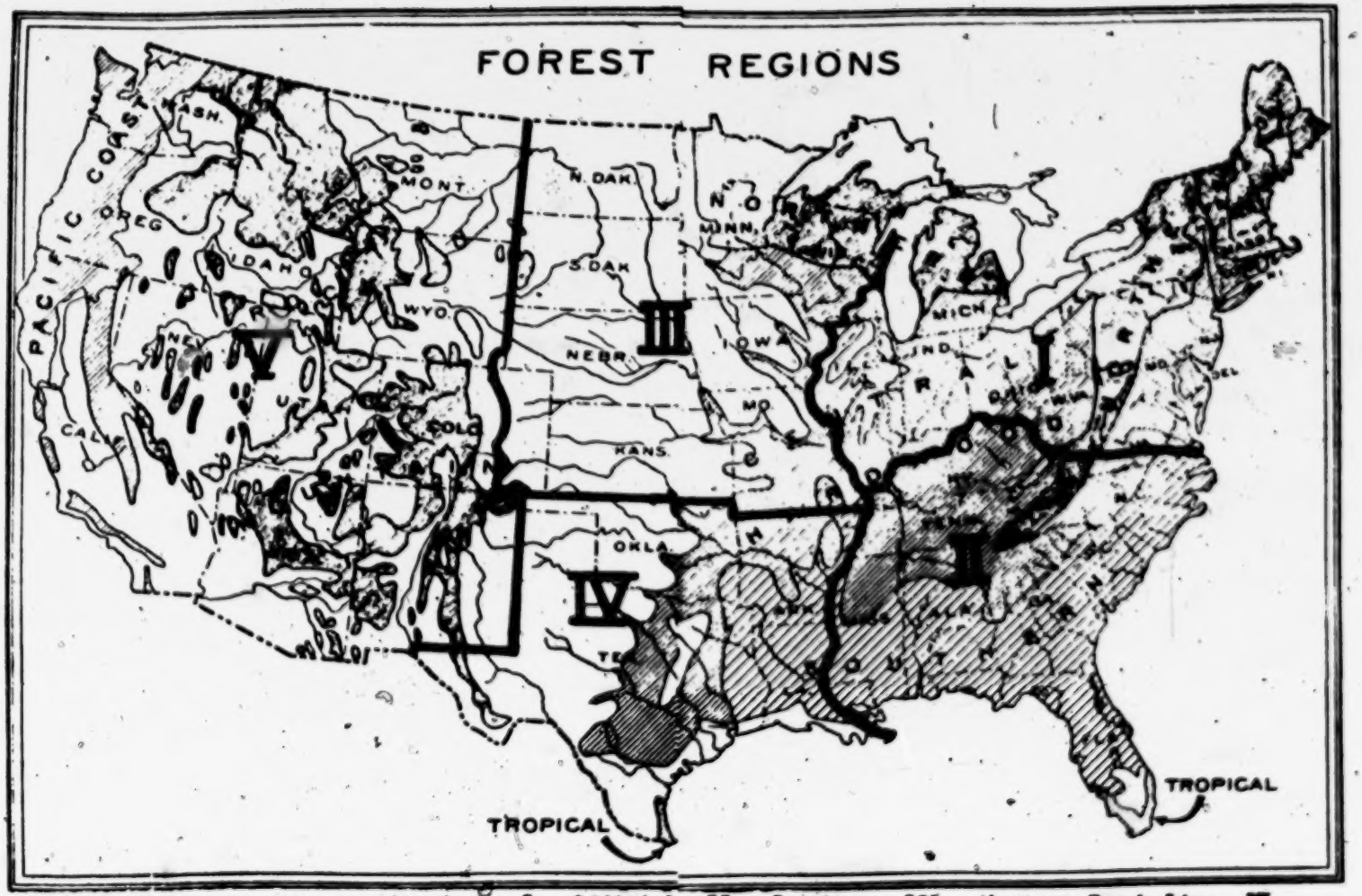
The central hardwood forest region extends (excluding the southern Appalachian Mountain country) from Connecticut westward to Southern Minnesota and south through the piedmont area and the Cumberland Plateau to the northern parts of Georgia, Alabama, and Mississippi and through Arkansas to eastern Oklahoma and central Texas. "Generally distributed over the region are white and black

[1] Ibid.
[2] Ibid., p. 39.

(Here follows 1 Photolithograph, side folio 5722)

Map 14

5722



Legend of freight rate territories: I - Official, II - Southern, III - Western Trunk Line, IV - Southwestern, V - Mountain-Pacific.

Source: U.S.D.A., Misc. Publication No. 217, Sept. 1936, pp. 34-35.

[fol. 5723] oaks, mockernut and pignut hickories, American elm, red maple, and sycamore. The northern red and scarlet oaks of the northern division of the region give way in the southern division to the southern red, post, and willow oaks. Chestnut (formerly very abundant), shagbark hickory, sugar maple, and rock elm practically drop out, while shortleaf pine greatly increases in abundance, dogwood and eastern red cedar become commercially important, and Osage-orange and persimmon appear frequently. The Texas extension of the region comprises vast areas of small-sized trees of post, southern red, and blackjack oaks, mesquite, and a number of different junipers or cedars."[1]

"The forests of the [central hardwood forest] region furnish large quantities of high-grade hardwood lumber which has constituted the raw material for wood-manufacturing industries in many States, * * *. Memphis, Tenn., has for many years been the largest center for hardwood lumber in the country."[2]

The southern forest region covers the Atlantic and Gulf Coastal Plains from eastern Maryland to eastern Texas, including portions of Missouri, Arkansas, and Oklahoma.

> "The yellow pine forest of the Southeastern States afford the only remaining important source of large timber production in the eastern half of the United States. Interspersed with the pine-bearing lands are extensive river and creek bottom lands and swamps in which are growing stands of mixed hardwoods and southern cypress. * * * The natural conditions are a soil of relatively low agricultural value, abundant rainfall, long growing season, and many species of trees of high commercial importance. * * *
>
> "Four species of pines, namely, shortleaf, loblolly, longleaf, and slash, make up the bulk of the stands. These are mentioned in the order of their prevalence in passing from north to south across the region. [fol. 5724] Shortleaf pine is found over an extensive region from New Jersey south to Florida and west to Missouri, Oklahoma, and Texas. Its best growth is in the broad piedmont or hilly area between the moun-

[1] Ibid., p. 40.

[2] Ibid., p. 41.

tains and the Coastal Plain. Loblolly pine grows extensively over the upper Coastal Plain. Mixed loblolly and shortleaf pines occur over a vast area in large timber holdings and on hundreds of thousands of farms. Over two-thirds of the total naval stores (spirits of turpentine and rosin) of the world is derived from the crude gum or resin of longleaf and slash pines growing in the southeastern part of the United States. * * *

"Three other pines make a slight addition to the total amount; namely, the pond pine * * * in the acid lands and swamps of the Atlantic Coastal Plain; the sand pine of the sand barrens of Florida; and the spruce pine * * *

"The lowland and swamp hardwoods, southern cypress, and an intermittent fringe of southern white cedar cover about one-third of the total area of the southern forest region. The prevailing hardwood trees are red (or sweet) gum, swamp black gum, and tupelo gum, willow oak, water oak, cottonwoods, willows, magnolias, and bays. * * *"[1]

Tropical forest region. "Two fringes of forest, made up chiefly of tropical tree species, occur along the coast in extreme southern Florida and in extreme southern coastal Texas. * * * Many kinds of hardwood trees, most of which are small and bear evergreen leaves and pulpy berries or stone fruit, make up the stand. A few are of some commercial or economic importance, like mastic or 'wild olive,' and the mangrove, whose impenetrable thickets hold the muddy banks, causing land to be built up, and form a protection against tropical hurricanes. * * *"[2]

[fol. 5725] The Rocky Mountain forest region covers a vast extent of mountains and high plateaus in the central-western part of the United States.

"* * * It embraces over 40 isolated forest areas or patches, some of large size like that in western Montana, northern Idaho, and eastern Washington, and another in Colorado, New Mexico, and Arizona. Many are relatively small timbered tracts, lying on the

[1] Ibid., pp. 41-42.

[2] Ibid., p. 43

ridges and higher mountain plateaus, interspersed with great treeless stretches and sometimes widely scattered in large arid districts, as in parts of Nevada, Utah, and Arizona. * * *

"The change in forest cover as one ascends a mountain slope may be illustrated by the successive belts in the southern Colorado-New Mexico forest area. First, at altitudes ranging from 5,000 feet on moister situations to 6,000 feet on drier slopes occurs a belt of one-seeded, alligator, or Utah junipers and pinon, or nut pine; above it ponderosa (western yellow) pine which forms extensive forests over the highly dissected Colorado plateau; with Douglas fir and white fir mingling in the stand in the upper part of the belt, and often so predominating as to form pure stands at 8,000 feet; and finally Engelmann spruce over an extensive horizontal belt terminating at the upper portion at altitudes of 9,000 to 11,000 feet in a belt of alpine fir.

"In the northern Montana-Idaho portion of the Rocky-Mountain region, forest growth begins at elevations of 3,000 to 4,000 feet and, depending very much upon the exposure and soil moisture, extends upward to 6,500 to 7,000 feet. Limber and western pine blend at 4,500 feet. The maximum commercial forest growth occurs at about 5,000 feet with limber pine on the dry southern exposures and on the moister or [fol. 5726] northern slopes Engelmann spruce and alpine fir. Another important tree in the central portion of the region is lodgepole pine, a tall slender tree which grows in dense stands. * * *"[1]

The Pacific coast forest region extends from the northwestern portion of Washington through Oregon to Southern California.

"Stands of very large firs, pines, hemlock, and cedars characterize the Pacific coast forest region. These are dense in the coastal forests of Washington and Oregon. In the extreme southern portion, in southern California, the timbered lands are surrounded with margins of a

[1] Ibid., pp. 43-44.

dense growth of dwarf broadleaf trees known as 'chaparral'.

"The big trees, or Sierra redwoods, of the Sierra Nevada mountains in central-eastern California reach enormous heights of over 300 feet and diameters up to 40 feet, and single trees contain up to 360,000 board feet of lumber. * * * The western red cedar, Douglas fir, and sugar pine of California all grow to heights of over 200 feet with diameters up to 12 to 15 feet. The western red cedar averages the largest of this group. Douglas fir, somewhat smaller, and sugar pine, with its thin rather smooth bark, range mostly from 6 to 9 feet in diameter. About four-fifths of the total standing saw timber of the country is found west of the Great Plains in the Rocky Mountain and Pacific coast forest regions. * * *"[2]

It should be noted that there are no statistics available on the distribution of the total stand of all forest trees mentioned above in connection with the description of various forest regions. The United States Forest Service, however, has released data on the stand of saw timber [fol. 5727] (on commercial forest land) by principal species and by regions for 1938. These data are discussed and presented in this report in the section on "Stand of Timber by Freight Rate Territories."

Original Forest Area

The original forest area of the continental United States is estimated to have been 822.2 million acres, excluding from 100 to 150 million acres of low-grade woodland and scrubs.[1] This acreage (822.2 million acres) constitutes 43.2 percent of the total land area of the United States.[2] "About 350,000,000 acres of forest land have been cleared for crops and pasture, but probably 50,000,000 acres of

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[2] Ibid., pp. 45-46.

[1] U. S. D. A., Forest Service, "Timber Depletion, Lumber Prices, Lumber Exports and Concentration of Timber Ownership," Report on Senate Resolution 311, June 1, 1920. Third Edition, 1928, p. 32.

[2] Land area of the United States is 1,903.2 million acres, exclusive of Alaska and the island possessions.

formerly cleared land have reverted to forest and brush, and about 25,000,000 acres are used for roads, railroads, cities, golf courses, etc." [3] By the close of 1938 the original forest land (822.2 million acres) had been reduced to 472.6 [fol. 5728] million acres,[4] or to 57.5 percent of the original forest area. Of the present area, 461.7 million acres constitute commercial forest land which, according to the definition by the United States Forest Service, is land capable of producing timber of commercial quantity and quality, and available now or prospectively for commercial use.[1] The remainder, 10.9 million acres, is commercially valuable land in parks, preserves, etc., withdrawn from timber use.[2]

Forest Land a Multiple-Use Resource

Forest land serves at least five major purposes: timber production, watershed services, recreation, support of wildlife, and forage production.[3]

> "With few exceptions, major uses need not be mutually exclusive; on the contrary, millions of acres can be used for two or more of them simultaneously. This unique multiple-use quality of forest land is one of its greatest assets.

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[3] Baker, supra, p. 21.

[4] Excluding 157.6 million acres of forest land chiefly valuable for purposes other than timber production, such as the oak-cedar breaks of Texas and Oklahoma, mesquite, pinon-juniper in the West, chaparral in Southern California, remote and inaccessible alpine ranges and other areas which appear to be permanently out of the commercial timber-producing class because of low productivity or extreme inaccessibility. Much of the area has an important value in protecting the water-sheds of navigable streams, preventing or reducing soil erosion, protecting wild life, providing game cover, etc.—U. S. D. A., Forest Service, "Forest Statistics: Area, Stand, Growth, and Drain" (prepared for Joint Congressional Committee on Forestry), 1939, Table 1 (processed).

[1] Ibid.

[2] Ibid.

[3] R. E. Marsh, Acting Chief, and William H. Gibbons, Senior Forester, Division of Forest Economics, Forest Service, "Forest-Resource Conservation," The Yearbook of Agriculture, 1940, p. 461.

"The nature and extent of the multiple-use quality may be seen in the acreages that can be used for different purposes:

"(1) Commercial timber crops can be grown on some 462 million acres.

[fol. 5729] "(2) Nearly three-fourths of all forest land exerts a major or moderate influence on watersheds. Fully half exerts a major influence. The latter includes the steep slopes of the Rockies, Sierras, Appalachians, and other mountain ranges of the West and East, which are the main sources of most major streams; erosible soils like those of the Piedmont and the high bluffs along the Mississippi; and other areas like the Ouachita section of the Ozarks, where streamflow or run-off conditions are critical.

"(3) More than half of the forest area, mainly in the West and South, is grazed by domestic livestock.

"(4) Practically the entire area is suitable for wildlife.

"(5) Eleven million acres of land naturally suitable for timber use has so far been set aside exclusively for scenic purposes and recreation, in the form of parks, monuments, and other reservations. Much of the rest can also be used for recreation."[1]

It should be noted, however, that the discussion in the present study is limited to commercial forest land as a source of timber supply.

Forest Areas by Freight Rate Territories

The distribution of the original forest land and commercial forest area in 1938, by freight rate territories, is given in Table 77. This table and also Tables 78-84 have two sets of data for the same territories, representing differences in the groupings of the states used in the make-up of the rate territory figures. This variation between groupings is caused by a difference in the allocation of states, divided by freight rate territory boundaries (Michigan, Wisconsin, Virginia, Louisiana, and Colorado), to par-

[1] Ibid.

(Here follows 1 Photolithograph, side folio 5730)

Table 77. - Forest Land, Original and in 1938, by Freight Rate Territories (1,000 acres)

Territory	Total land area		Forest areas					
			Original forest 1/		Forest in 1938 2/		Decrease	
	Amount	Percent of total	Amount	Percent of total	Amount	Percent of total	Amount	Percent
Grouping A 3/								
Official	274,263	14.41	245,478	29.86	111,574	24.17	133,904	54.55
Southern	238,291	12.52	224,000	27.24	128,413	27.81	95,587	42.67
Western Trunk Line	362,278	19.04	114,240	13.89	52,875	11.45	61,365	53.72
Southwestern	275,038	14.45	99,600	12.11	51,884	11.24	47,716	47.91
Mountain-Pacific	753,347	39.58	138,920	16.90	116,951	25.33	21,969	15.81
United States	1,903,217	100.00	822,238	100.00	461,697	100.00	360,541	43.85
Grouping B 3/								
Official	211,708	11.12	185,318	22.54	79,520	17.22	105,798	57.09
Southern	293,121	15.40	274,560	33.39	157,973	34.22	116,587	42.46
Western Trunk Line	399,065	20.97	149,440	18.17	71,554	15.50	77,886	52.12
Southwestern	245,976	12.93	74,000	9.00	35,699	7.73	38,301	51.76
Mountain-Pacific	753,347	39.58	138,920	16.90	116,951	25.33	21,969	15.81
United States	1,903,217	100.00	822,238	100.00	461,697	100.00	360,541	43.85

1/ Excluding low-grade woodland and scrub. 2/ Commercial forest land.

3/ The variation between Grouping A and Grouping B is due to a difference in the allocation of states divided by freight rate territory boundaries as follows:

State	Grouping A	Grouping B
Michigan	Official	Western Trunk Line
Wisconsin	Western Trunk Line	Western Trunk Line
Virginia	Official	Southern
Louisiana	Southwestern	Southern
Colorado	Mountain-Pacific	Mountain-Pacific

Sources:

U.S.D.A., Statistical Bulletin No. 21, "American Forests and Forest Products," 1928, pp. 5-6.

U.S. Forest Service, "Commercial Forest Area of the United States, by Character of Growth and by Region and States [in 1938]." A table prepared for Joint Congressional Committee on Forestry, 1939 (processed).

U.S. Forest Service, "Timber Depletion, Lumber Prices, Lumber Exports, and Concentration of Timber Ownership," Report on Senate Resolution 311, June 1, 1920. Third Edition, 1928, p. 32.

5730

[fol. 5731] ticular rate territories. It should be noted that the assignment of Wisconsin to Western Trunk Line territory and Colorado to Mountain-Pacific territory in both groupings is due to the fact that portions of Wisconsin and Colorado lying in Official and Western Trunk Line territories, respectively, have insignificant forest area, and practically no stumpage at all.[1]

Table 77 shows that in both groupings forest areas in 1938 of the Official and Western Trunk Line territories decreased over 50 percent as compared with the original forest land in these territories. Forest areas (in both groupings) of the Southwestern territory declined nearly 50 percent, and of the Southern territory over 40 percent. The forest areas of the Mountain-Pacific territory, however, decreased only 16 percent. The United States Forest Service, referring to the utilization of the original forests, pointed out that "cutting has naturally been heaviest in the most fertile and most densely populated sections of the country."[2]

The United States Forest Service classifies commercial forest areas bearing timber of different character of growth as follows:

1. Saw-timber areas include areas characterized by timber large enough for sawlog (lumber) in accordance with the practice of the region[3] regardless of its actual use. Old growth areas bear uncut or lightly cut stands of mature saw timber; second growth areas support predominantly [fol. 5732] immature saw timber which has come in following removal of the old timber by cutting or other causes.

2. Cordwood areas bear stands characterized by timber too small for sawlog production but large enough for cord-

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[1] National Resources Board, Land Planning Committee, "Forest Land Resources, Requirements Problems, and Policy," Report prepared by the U. S. Forest Service, 1935, figures 8-16.

[2] Report on Senate Resolution 311, supra, p. 32.

[3] In 1938 the forest area of the United States was divided by the U. S. Forest Service into the following regions: Northeastern, Central, Lake, South, Columbia River Basin, California, South Rocky Mountain, and Plains.—For source see next footnote.

wood regardless of whether the stand is cut for this use or held for saw timber.

3. Fair to satisfactory restocking areas include lands on which at least 40 percent of the growing space is fully occupied by commercial species predominantly below cordwood size.

4. Poor to non-restocking areas include lands with less than 40 percent of the growing space fully occupied by commercial species predominantly below cordwood size.[1]

Of the total commercial forest area (461.7 million acres in 1938), 46 percent or 212.8 million acres is saw timber area of which 100.8 million acres is old growth and 112 million acres is second growth. The acreage of cordwood area constitutes 22 percent or 100.8 million acres. The remainder, fair to satisfactory and non-restocking areas, contributes 32 precent or 148 million acres.[2]

The distribution of commercial forest areas by character of growth and by territories in 1938 is presented in Table 78. This table shows that the following are the leading territories in commercial forest areas, by character of their growth: the Mountain-Pacific territory has in old growth acreage 63 percent of the U. S. total. The Southern territory in second growth acreage has 38 percent of the U. S. total in Grouping A and 49 percent in Grouping B. In its cordwood area there is 30 and 36 percent of the U. S. total in Groupings A and B, respectively, and in the total forest area 34 percent in Grouping B and 28 percent in Grouping A. Official territory ranks second in second growth acreage (19 and 24 percent) and in cordwood area (29 and 22 percent). The Western Trunk Line and Southwestern territories have the lowest total acreage (for percentages see Table 78).

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[1] U. S. Forest Service, "Commercial Forest Area of the United States, by Character of Growth and by Regions and States [in 1938]." A table prepared for Joint Congressional Committee on Forestry, 1939 (processed).

[2] Ibid.

(Here follow 2 Photolithographs, side folios 5733-5734)

Table 78.—Commercial Forest Area, by Character of Growth and by Freight Rate Territories, 1938

Grouping A 1/

Area	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Thousand acres)					
Saw timber area:						
Old growth	12,122	15,162	2,199	7,980	63,369	100,832
Second growth	26,770	43,051	6,364	21,645	14,180	112,030
Total saw timber area	38,892	58,213	8,533	29,625	77,549	212,862
Cordwood area	29,166	30,604	14,255	9,278	17,488	100,791
Fair to satisfactory restocking area	23,305	19,412	13,967	5,783	8,839	71,306
Poor to non-restocking area	20,211	20,184	16,070	7,198	13,075	76,738
Total forest area	111,574	128,413	52,875	51,884	116,951	461,697
	Percent of territory totals					
Saw timber area:						
Old growth	10.87	11.81	4.16	15.38	54.18	21.84
Second growth	23.99	33.52	12.07	41.72	12.13	24.26
Total saw timber area	34.86	45.33	16.23	57.10	66.31	46.10
Cordwood area	26.14	23.83	26.96	17.88	14.95	21.83
Fair to satisfactory restocking area	20.89	15.12	26.42	11.15	7.56	15.45
Poor to non-restocking area	18.11	15.72	30.39	13.87	11.18	16.62
Total forest area	100.00	100.00	100.00	100.00	100.00	100.00
	Percent of U.S. totals					
Saw timber area:						
Old growth	12.02	15.04	2.18	7.91	62.85	100.00
Second growth	23.89	38.43	5.70	19.32	12.66	100.00
Total saw timber area	18.27	27.35	4.03	13.92	36.43	100.00
Cordwood area	28.94	30.36	14.14	9.21	17.35	100.00
Fair to satisfactory restocking area	32.68	27.22	19.59	8.11	12.40	100.00
Poor to non-restocking area	26.34	26.30	20.94	9.38	17.04	100.00
Total forest area	24.17	27.81	11.45	11.24	25.33	100.00

(Continued)

Table 78.—Commercial Forest Area, by Character of Growth and by Freight Rate Territories, 1938 (Continued)

Grouping B 1/

Area	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Thousand acres)					
Saw timber area:						
Old growth	8,802	19,826	4,197	4,638	63,369	100,832
Second growth	20,741	54,639	7,537	14,933	14,180	112,030
Total saw timber area	29,543	74,465	11,734	19,571	77,549	212,862
Cordwood area	21,663	36,744	19,659	7,231	17,488	100,791
Fair to satisfactory restocking area	16,991	22,929	18,134	4,413	8,839	71,306
Poor to non-restocking area	11,317	23,835	24,027	4,484	13,075	76,738
Total forest area	79,520	157,973	71,554	35,699	116,951	461,697
	Percent of territory totals					
Saw timber area:						
Old growth	11.07	12.55	5.87	12.99	54.18	21.84
Second growth	26.08	34.59	10.53	41.83	12.13	24.26
Total saw timber area	37.15	47.14	16.40	54.82	66.31	46.10
Cordwood area	27.25	23.26	24.68	20.26	14.95	21.83
Fair to satisfactory restocking area	21.37	14.51	25.34	12.36	7.56	15.45
Poor to non-restocking area	14.23	15.09	33.58	12.56	11.18	16.62
Total forest area	100.00	100.00	100.00	100.00	100.00	100.00
	Percent of U.S. totals					
Saw timber area:						
Old growth	8.73	19.66	4.16	4.60	62.85	100.00
Second growth	18.51	48.77	6.73	13.33	12.66	100.00
Total saw timber area	13.88	34.98	5.51	9.20	36.43	100.00
Cordwood area	21.50	36.45	17.52	7.18	17.35	100.00
Fair to satisfactory restocking area	23.83	32.15	25.43	6.19	12.40	100.00
Poor to non-restocking area	14.75	31.06	31.31	5.84	17.04	100.00
Total forest area	17.22	34.22	15.50	7.73	25.33	100.00

1/ The variation between Grouping A and Grouping B is due to a difference in the allocation of states divided by freight rate territory boundaries as follows:

State	Grouping A	Grouping B
Michigan	Official	Western Trunk Line
Wisconsin	Western Trunk Line	Western Trunk Line
Virginia	Official	Southern
Louisiana	Southwestern	Southern
Colorado	Mountain-Pacific	Mountain-Pacific

Source: U.S. Forest Service, "Commercial Forest Area of the United States, by Character of Growth and by Region and States [in 1938]." A table prepared for Joint Congressional Committee on Forestry, 1939 (processed).

[fol. 5735] *Stand of Timber by Freight Rate Territories*

Total Stand of Softwoods and Hardwoods by Character of Growth

The distribution of the total stand of timber on commercial forest land by type of material and by freight rate territories is given in Table 79. The total volume of standing timber, including both saw timber and cordwood, is estimated by the U. S. Forest Service at 519.3 billion cubic feet. Of this volume, 376.9 billion cubic feet, or 73 percent, is softwood and 142.4 billion cubic feet, or 27 percent, is hardwood. Saw timber constitutes 364.6 billion cubic feet, 70 percent of the total, and the remainder, 154.7 billion cubic feet, or 30 percent is cordwood.

Of the total volume of saw timber, 296.9 billion cubic feet (81 percent) is softwood and 67.7 billion cubic feet (19 percent) is hardwood. Eighty billion cubic feet of cordwood are softwood species and the balance, 74.7 billion cubic feet, are of hardwood species.

The distribution of total stand of softwoods and hardwoods by type of material and by freight rate territories (Table 79) according to the A and B state groupings shows that the Mountain-Pacific territory is outstanding in softwood saw timber (81 percent of U. S. totals in both groupings) and in cordwood trees of softwood species (65 percent). In hardwoods, the Southern territory leads in saw timber (36 percent) in Grouping A and 50 percent in Grouping B) and the Official territory ranks first in cordwood (50 and 43 percent in Groupings A and B, respectively). Official territory also ranks second in hardwood saw timber, followed by the Southwestern and Western Trunk Line territories. Mountain-Pacific territory ranks lowest in hardwoods.

Stand of Saw Timber by Character of Growth

The U. S. Forest Service estimated that the total stand of saw timber on commercial forest land in the United States is equal to 1,764 billion board feet (see Table 80)

Table 79.--Total Stand of Softwoods and Hardwoods on Commercial Forest Land, by Type of Material and by Freight Rate Territories, 1938

Grouping A 1/

Material	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Million cubic feet)					
w timber trees:						
Softwood	12,390	30,386	3,394	11,582	239,159	296,911
Hardwood	21,060	24,555	6,510	14,552	1,069	67,746
Total saw timber trees	33,450	54,941	9,904	26,134	240,228	364,657
ordwood trees:						
Softwood	8,706	11,668	3,101	4,256	52,234	79,965
Hardwood	37,100	18,081	8,483	8,911	2,113	74,693
Total cordwood trees	45,806	29,749	11,584	13,167	54,352	154,658
ll material:						
Softwood	21,096	42,054	6,495	15,838	291,393	376,876
Hardwood	58,160	42,636	14,993	23,463	3,187	142,439
Total all material	79,256	84,690	21,483	39,301	294,580	519,315
	Percent of territory totals					
w timber trees:						
Softwood	15.64	35.88	15.79	29.47	81.19	57.17
Hardwood	26.57	28.99	30.30	37.03	.36	13.05
Total saw timber trees	42.21	64.87	46.09	66.50	81.55	70.22
rdwood trees:						
Softwood	10.98	13.78	14.43	10.83	17.73	15.40
Hardwood	46.81	21.35	39.48	22.67	.72	14.38
Total cordwood trees	57.79	35.13	53.91	33.50	18.45	29.78
l material:						
Softwood	26.62	49.66	30.23	40.30	98.92	72.57
Hardwood	73.38	50.34	69.77	59.70	1.08	27.43
Total all material	100.00	100.00	100.00	100.00	100.00	100.00
	Percent of U. S. totals					
w timber trees:						
Softwood	4.17	10.24	1.14	3.90	80.55	100.00
Hardwood	31.08	36.25	9.61	21.48	1.58	100.00
Total saw timber trees	9.17	15.07	2.71	7.17	65.88	100.00
rdwood trees:						
Softwood	10.89	14.59	3.88	5.32	65.32	100.00
Hardwood	49.67	24.21	11.36	11.93	2.83	100.00
Total cordwood trees	29.62	19.24	7.49	8.51	35.14	100.00
l material:						
Softwood	5.60	11.16	1.72	4.20	77.32	100.00
Hardwood	40.83	29.93	10.53	16.47	2.24	100.00
Total all material	15.26	16.31	4.14	7.57	56.72	100.00

(Continued)

Table 79.--Total Stand of Softwoods and Hardwoods on Commercial Forest Land, by Type of Material and by Freight Rate Territories, 1938 (Continued)

Grouping B 1/

Material	Territory: Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	United States total
	(Million cubic feet)					
w timber trees:						
Softwood	7,647	36,071	5,889	8,145	239,159	296,911
Hardwood	13,307	35,982	11,559	7,829	1,069	67,746
Total saw timber trees	20,954	70,053	17,448	15,974	240,228	364,657
rdwood trees:						
Softwood	5,744	14,370	4,454	3,163	52,234	79,965
Hardwood	31,950	23,824	10,868	5,933	2,118	74,693
Total cordwood trees	37,694	38,194	15,322	9,096	54,352	154,658
l material:						
Softwood	13,391	50,441	10,343	11,308	291,393	376,876
Hardwood	45,257	57,806	22,427	13,752	3,187	142,439
Total all material	58,648	108,247	32,770	25,070	294,580	519,315
	Percent of territory totals					
w timber trees:						
Softwood	13.04	33.32	17.97	32.49	81.19	57.17
Hardwood	22.69	31.40	35.27	31.23	.36	13.05
Total saw timber trees	35.73	64.72	53.24	63.72	81.55	70.22
rdwood trees:						
Softwood	9.79	13.27	13.59	12.62	17.73	15.40
Hardwood	54.48	22.01	33.17	23.66	.72	14.38
Total cordwood trees	64.27	35.28	46.75	36.28	18.45	29.78
l material:						
Softwood	22.83	46.60	31.56	45.11	98.92	72.57
Hardwood	77.17	53.40	68.44	54.89	1.08	27.43
Total all material	100.00	100.00	100.00	100.00	100.00	100.00
	Percent of U. S. totals					
timber trees:						
oftwood	2.57	12.15	1.98	2.75	80.55	100.00
ardwood	19.64	50.16	17.06	11.56	1.58	100.00
Total saw timber trees	5.75	19.21	4.78	4.38	65.88	100.00
dwood trees:						
oftwood	7.18	17.97	5.57	3.96	65.32	100.00
ardwood	42.78	31.90	14.55	7.94	2.83	100.00
Total cordwood trees	24.37	24.70	9.91	5.88	35.14	100.00
material:						
oftwood	3.55	13.38	2.75	3.00	77.32	100.00
ardwood	31.77	40.58	15.75	9.66	2.24	100.00
Total all material	11.29	20.85	6.31	4.83	56.72	100.00

The variation between Grouping A and Grouping B is due to a difference in the allocation of states divided by freight rate territory boundaries as follows:

State	Grouping A	Grouping B
Michigan	Official	Western Trunk Line
Wisconsin	Western Trunk Line	Western Trunk Line
Virginia	Official	Southern
Louisiana	Southwestern	Southern
Colorado	Mountain-Pacific	Mountain-Pacific

rce: U. S. Forest Service, "Total Stand of Softwoods and Hardwoods in the United States, by Type of Material and by Regions and States [in 1933]." A table prepared for Joint Congressional Committee on Forestry, 1939 (processed).

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[fol. 5738] of which 1.493 billion board feet, 85 percent of the total, is in softwood species and 271 billion board feet, 15 percent, is in hardwoods. Softwoods are made up of 1,156 billion board feet of old growth (77 percent of total softwoods) and 337 billion board feet (23 percent) of second growth. Hardwood saw timber is composed of 111 billion board feet (41 percent of total hardwood) of old growth and 160 billion board feet (59 percent) of second growth.

The distribution of the stand of saw timber on commercial forest land by character of growth and by freight rate territories (Table 80) shows that the Mountain-Pacific territory leads in softwoods of old growth, and of second growth (92 percent and 43 percent of the U. S. total, respectively) and in the total saw timber (69 percent of the total stand of saw timber). Southern territory ranks first in hardwoods of old growth (41 and 57 percent of the U. S. total hardwoods for Groupings A and B, respectively) and in hardwoods of second growth (45 percent in Grouping B) and ranks second in softwoods of second growth (32 and 38 percent). The Southern territory is also second in the total stand of saw timber (14 and 18 percent of the U. S. total).

Official territory is the first in hardwoods of second growth in Grouping A (37 percent of the U. S. total) and it is the second in hardwoods of second growth in Grouping B (29 percent). It also ranks second in the hardwoods of old growth (28 and 12 percent for Groupings A and B, respectively). Southwestern and Western Trunk Line territories rank lowest in the order named.

Stand of Cordwood

There are some 2,455 million cords of wood in trees 5 inches in diameter up to saw-timber size, and in tops and limbs of saw timber trees.[1] The total stand of cordwood on various areas of commercial forest land shows the following distribution (taken from Table 82):

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[1] Marsh and Gibbons, supra, pp. 475-476.

Table 80.—Stand of Saw Timber on Commercial Forest Land by Character of Growth and by Freight Rate Territories, 1938

Grouping A 1/

Materials	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Million board feet)					
Softwoods:						
Old growth	29,361	38,145	6,793	13,485	1,068,402	1,156,186
Second growth	33,419	108,070	7,973	42,872	144,600	336,934
Total softwoods	62,780	146,215	14,766	56,357	1,213,002	1,493,120
Hardwoods:						
Old growth	31,334	45,158	7,657	26,798	1	110,948
Second growth	58,965	52,387	14,620	28,655	4,956	159,583
Total hardwoods	90,299	97,545	22,277	55,453	4,957	270,531
Total saw timber	153,079	243,760	37,043	111,810	1,217,959	1,763,651
	Percent of territory totals					
Softwoods:						
Old growth	19.18	15.65	18.34	12.06	87.72	65.56
Second growth	21.83	44.33	21.52	38.34	11.87	19.10
Total softwoods	41.01	59.98	39.86	50.40	99.59	84.66
Hardwoods:						
Old growth	20.47	18.53	20.67	23.97	-	6.29
Second growth	38.52	21.49	39.47	25.63	.41	9.05
Total hardwoods	58.99	40.02	60.14	49.60	.41	15.34
Total saw timber	100.00	100.00	100.00	100.00	100.00	100.00
	Percent of U.S. totals					
Softwoods:						
Old growth	2.54	3.30	0.59	1.16	92.41	100.00
Second growth	9.92	32.07	2.37	12.72	42.92	100.00
Total softwoods	4.20	9.79	.99	3.78	81.24	100.00
Hardwoods:						
Old growth	28.24	40.70	6.90	24.16	-	100.00
Second growth	36.95	32.83	9.16	17.96	3.10	100.00
Total hardwoods	33.38	36.05	8.23	20.50	1.83	100.00
Total saw timber	8.68	13.82	2.10	6.34	69.06	100.00

(Continued)

Table 80.--Stand of Saw Timber on Commercial Forest Land, by Character of Growth and by Freight Rate Territories, 1938 (Continued)

Grouping B 1/

Materials	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Million board feet)					
Softwoods:						
Old growth	19,732	45,113	13,852	9,087	1,068,402	1,156,186
Second growth	22,504	128,879	10,498	30,453	144,600	336,934
Total softwoods	42,236	173,992	24,350	39,540	1,213,002	1,493,120
Hardwoods:						
Old growth	13,823	63,159	21,078	12,887	1	110,948
Second growth	46,321	71,182	20,164	16,960	4,956	159,583
Total hardwoods	60,144	134,341	41,242	29,847	4,957	270,531
Total saw timber	102,380	308,333	65,592	69,387	1,217,959	1,763,651
	Percent of territory totals					
Softwoods:						
Old growth	19.27	14.63	21.12	13.10	87.72	65.56
Second growth	21.98	41.80	16.00	43.89	11.87	19.10
Total softwoods	41.25	56.43	37.12	56.99	99.59	84.66
Hardwoods:						
Old growth	13.50	20.48	32.14	18.57	-	6.29
Second growth	45.25	23.09	30.74	24.44	.41	9.05
Total hardwoods	58.75	43.57	62.88	43.01	.41	15.34
Total saw timber	100.00	100.00	100.00	100.00	100.00	100.00
	Percent of U.S. totals					
Softwoods:						
Old growth	1.71	3.90	1.20	0.78	92.41	100.00
Second growth	6.68	38.25	3.11	9.04	42.92	100.00
Total softwoods	2.83	11.65	1.63	2.65	81.24	100.00
Hardwoods:						
Old growth	12.46	56.93	19.00	11.61	-	100.00
Second growth	29.03	44.61	12.63	10.63	3.10	100.00
Total hardwoods	22.23	49.66	15.25	11.03	1.83	100.00
Total saw timber	5.81	17.48	3.72	3.93	69.06	100.00

The variation between Grouping A and Grouping B is due to a difference in the allocation of states divided by freight rate territory boundaries as follows:

State	Grouping A	Grouping B
Michigan	Official	Western Trunk Line
Wisconsin	Western Trunk Line	Western Trunk Line
Virginia	Official	Southern
Louisiana	Southwestern	Southern
Colorado	Mountain-Pacific	Mountain-Pacific

Source: U.S. Forest Service, "Stand of Saw Timber in the United States, by Character of Growth and by Regions and States [in 1938]." A table prepared for Joint Congressional Committee on Forestry, 1939 (processed).

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Table 81. - Stand of Saw Timber, Old Growth and Second Growth, on Commercial Forest Land, by Freight Rate Territories, 1938

	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
	(Million board feet)					
Grouping A						
Total old growth	60,695	83,303	14,450	40,283	1,068,403	1,267,134
Total second growth	92,384	160,457	22,593	71,527	149,556	496,517
Total stand	153,079	243,760	37,043	111,810	1,217,959	1,763,651
Percent of U. S. totals						
Total old growth	4.79	6.57	1.14	3.18	84.32	100.00
Total second growth	18.61	32.32	4.55	14.40	30.12	100.00
Total stand	8.68	13.82	2.10	6.34	69.06	100.00
Grouping B						
Total old growth	33,555	108,272	34,930	21,974	1,068,403	1,267,134
Total second growth	68,825	200,061	30,662	47,413	149,556	496,517
Total stand	102,380	308,333	65,592	69,387	1,217,959	1,763,651
Percent of U. S. totals						
Total old growth	2.65	8.54	2.76	1.73	84.32	100.00
Total second growth	13.86	40.29	6.18	9.55	30.12	100.00
Total stand	5.81	17.48	3.72	3.93	69.06	100.00

Source: Based on Table 80.

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[fol. 5742]

Cordwood on	Million cords	Percent
Saw timber area:		
Softwood	888.7	36
Hardwood	687.9	28
Total	1,576.6	64
Cordwood:		
Softwood	382.6	15
Hardwood	385.8	16
Total	768.4	31
Restocking area:		
Softwood	29.4	1
Hardwood	80.4	4
Total	109.8	5
Grand total	2,454.8	100

The distribution of the stand of cordwood on commercial forest land by freight rate territories (Tables 82 and 82A) indicates that the Mountain-Pacific territory leads in the stands of softwood cordwood on softwood saw timber area (69 percent of the total cordwood on this area) and softwood cordwood area (67 percent of the total), and also in the total stand of softwood cordwood on the total forest area (67 percent). The stand of hardwood cordwood of the Mountain-Pacific territory, however, is insignificant (less than 1 percent). The Southern territory leads in the stand of cordwood on hardwood saw timber area (36 and 49 percent for Grouping A and B, respectively) and in the total stand of hardwood cordwood in Grouping B (37 percent). It is second in the total stand of softwood cordwood (14 pereent for Grouping A and 18 percent for Grouping B). Official territory leads in the stands of hardwood cordwood on cordwood area (54 and 46 percent) and on restock-

ing area (67 and 56 percent) and also in the total stand of hardwood cordwood in Grouping A (43 percent). In the total stand of softwood cordwood the Official territory ranks third (9 percent in Grouping A and 6 percent in Grouping B). The Western Trunk Line territory is second in the

(Here follow 3 Photolithographs, side folios 5743-5745)

Table 82.--Stand of Cordwood on Saw Timber, Cordwood, and Restocking Areas, by Freight Rate Territories, 1938

Grouping A 1/

Item	Territory					United States total
	Official	Southern	Western Trunk Line	Southwestern	Mountain-Pacific	
	(Thousand cords)					
Saw timber area:						
Softwood	64,737	134,340	17,628	55,755	616,196	888,656
Hardwood	239,223	247,818	55,803	142,088	3,003	687,935
Total on saw timber area	303,960	382,158	73,431	197,843	619,199	1,576,591
Cordwood area:						
Softwood	44,601	46,184	24,169	9,876	257,765	382,595
Hardwood	206,809	68,843	71,483	31,973	6,715	385,823
Total on cordwood area	251,410	115,027	95,652	41,849	264,480	768,418
Restocking area:						
Softwood	12,600	7,233	5,496	1,111	2,912	29,352
Hardwood	53,690	3,093	20,209	3,329	89	80,410
Total on restocking area	66,290	10,326	25,705	4,440	3,001	109,762
Total cordwood on all areas	621,660	507,511	194,788	244,132	886,680	2,454,771
	Percent of territory totals					
Saw timber area:						
Softwood	10.42	26.47	9.05	22.84	69.49	36.20
Hardwood	38.48	48.83	28.65	58.20	.34	28.03
Total on saw timber area	48.90	75.30	37.70	81.04	69.83	64.23
Cordwood area:						
Softwood	7.17	9.10	12.41	4.04	29.07	15.58
Hardwood	33.27	13.57	36.70	13.10	.76	15.72
Total on cordwood area	40.44	22.67	49.11	17.14	29.83	31.30
Restocking area:						
Softwood	2.03	1.42	2.82	.46	.33	1.20
Hardwood	8.63	.61	10.37	1.36	.01	3.27
Total on restocking area	10.66	2.03	13.19	1.82	.34	4.47
Total cordwood on all areas	100.00	100.00	100.00	100.00	100.00	100.00
	Percent of U. S. totals					
Saw timber area:						
Softwood	7.29	15.12	1.98	6.27	69.34	100.00
Hardwood	34.77	36.02	8.11	20.66	.44	100.00
Total on saw timber area	19.28	24.24	4.66	12.55	37.27	100.00
Cordwood area:						
Softwood	11.66	12.07	6.32	2.58	67.37	100.00
Hardwood	53.60	17.84	18.53	8.29	1.74	100.00
Total on cordwood area	32.72	14.97	12.45	5.44	34.42	100.00
Restocking area:						
Softwood	42.93	24.64	18.72	3.79	9.92	100.00
Hardwood	66.77	3.85	25.13	4.14	.11	100.00
Total on restocking area	60.39	9.41	23.42	4.05	2.73	100.00
Total cordwood on all areas	25.32	20.67	7.94	9.95	36.12	100.00

(Continued)

Table 82.--Stand of Cordwood on Saw Timber, Cordwood, and Restocking Areas, by Freight Rate Territories, 1938 (Continued)

Grouping B 1/

Item	Territory					United States total
	Official	Southern	Western Trunk Line	Southwestern	Mountain-Pacific	
	(Thousand cords)					
Saw timber area:						
Softwood	33,257	166,123	32,998	40,082	616,196	888,656
Hardwood	169,501	335,852	96,395	83,184	7,003	687,935
Total on saw timber area	202,758	501,975	129,393	123,266	619,199	1,576,591
Cordwood area:						
Softwood	31,659	54,337	31,088	7,746	257,765	382,595
Hardwood	179,107	86,577	83,645	24,779	6,715	385,823
Total on cordwood area	210,765	140,914	119,733	32,525	264,480	768,418
Restocking area:						
Softwood	9,638	8,037	8,033	732	2,912	29,352
Hardwood	44,774	4,051	28,793	2,743	89	80,450
Total on restocking area	54,372	12,088	36,826	3,475	3,001	109,802
Total cordwood on all areas	467,895	654,977	285,952	159,266	886,680	2,454,771
	Percent of territory totals					
Saw timber area:						
Softwood	7.11	25.36	11.54	25.17	69.49	36.20
Hardwood	36.23	51.28	33.71	52.23	.34	28.03
Total on saw timber area	43.34	76.64	45.25	77.40	69.83	64.23
Cordwood area:						
Softwood	6.77	8.29	10.87	4.86	29.07	15.58
Hardwood	38.28	13.22	31.00	15.56	.76	15.72
Total on cordwood area	45.05	21.51	41.87	20.42	29.83	31.30
Restocking area:						
Softwood	2.06	1.23	2.81	.46	.33	1.20
Hardwood	9.56	.62	10.07	1.72	.01	3.27
Total on restocking area	11.62	1.85	12.88	2.18	.34	4.47
Total cordwood on all areas	100.00	100.00	100.00	100.00	100.00	100.00
	Percent of U. S. totals					
Saw timber area:						
Softwood	3.74	18.70	3.71	4.51	69.34	100.00
Hardwood	24.64	48.82	14.01	12.09	1.44	100.00
Total on saw timber area	12.86	31.84	8.21	7.82	39.27	100.00
Cordwood area:						
Softwood	8.28	14.20	8.13	2.02	67.37	100.00
Hardwood	46.42	22.44	21.98	6.42	1.74	100.00
Total on cordwood area	27.43	18.34	15.58	4.23	34.42	100.00
Restocking area:						
Softwood	32.84	27.38	27.37	2.49	9.92	100.00
Hardwood	55.63	5.04	35.81	3.41	.11	100.00
Total on restocking area	49.54	11.01	33.55	3.17	2.73	100.00
Total cordwood on all areas	19.06	26.63	11.65	6.49	36.12	100.00

1/ The variation between Grouping A and Grouping B is due to a difference in the allocation of states divided by freight rate territory boundaries as follows:

State	Grouping A	Grouping B
Michigan	Official	Western Trunk Line
Wisconsin	Western Trunk Line	Western Trunk Line
Virginia	Official	Southern
Louisiana	Southwestern	Southern
Colorado	Mountain-Pacific	Mountain-Pacific

Source: U. S. Forest Service. "Stand of Cordwood on Saw Timber, Cordwood, and Restocking Areas of the United States, by Regions and States (in 1938)." A table prepared for Joint Congressional Committee on Forestry, 1939 (processed).

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Table 82-A. - Total Stand of Cordwood, Softwood and Hardwood, on Commercial Forest Land, by Freight Rate Territories, 1938

(Thousand cords)

	Territory					United States total
	Official	Southern	Western Trunk Line	South-western	Mountain-Pacific	
Grouping A						
Softwood cordwood	121,938	187,757	47,293	66,742	876,873	1,300,603
Hardwood cordwood	499,722	319,754	147,495	177,390	9,807	1,154,168
Total stand of cordwood	621,660	507,511	194,788	244,132	886,680	2,454,771
Percent of U. S. totals						
Softwood cordwood	9.37	14.44	3.64	5.13	67.42	100.00
Hardwood cordwood	43.30	27.70	12.78	15.37	.85	100.00
Total stand of cordwood	25.32	20.67	7.94	9.95	36.12	100.00
Grouping B						
Softwood cordwood	74,554	228,497	72,119	48,560	876,873	1,300,603
Hardwood cordwood	393,342	426,480	213,833	110,706	9,807	1,154,168
Total stand of cordwood	467,896	654,977	285,952	159,266	886,680	2,454,771
Percent of U. S. totals						
Softwood cordwood	5.73	17.57	5.55	3.73	67.42	100.00
Hardwood cordwood	34.08	36.95	18.53	9.59	.85	100.00
Total stand of cordwood	19.06	26.68	11.65	6.49	36.12	100.00

Source: Based on Table 82.

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[fol. 5746] stand of hardwood cordwood on cordwood and restocking areas, but in the total stand of hardwood cordwood it is third in Grouping B and fourth in Grouping A. It is fourth in the total stand of softwood cordwood in Grouping B and fifth in Grouping A. Southwestern territory ranks fourth in the total stand of softwood cordwood, in Grouping A and fifth in Grouping B. It is third in the total stand of hardwood cordwood in Grouping A and fourth in Grouping B.

Ranking of Freight Rate Territories in Forest Areas and Stands of Timber

For the sake of convenience the ranking of each of the five freight rate territories (in Grouping A and Grouping B) according to their importance in forest areas and stand of timber by character of growth, is presented in Table 83. The territories are ranked from 1 to 5 in order of their importance in each category of forest area and stand of timber.

The Mountain-Pacific territory ranks first in Groupings A and B in the following:

Area of old-growth saw timber.
Total area of saw timber.
Stand of old-growth softwood saw timber.
Stand of second-growth softwood saw timber.
Total stand of softwood saw timber.
Total stand of old-growth saw timber.
Total stand of saw timber.
Stand of soft cordwood on saw-timber area.
Total stand of cordwood on saw-timber area.
Stand of soft cordwood on cordwood area.
Total stand of cordwood on cordwood area.
Stand of soft cordwood on all areas.
Total stand of cordwood on all areas.
Total stand of all softwood timber.
Total stand of all timber.

The Southern territory is first in:

	in Grouping
Area of second-growth saw timber	A and B
Cordwood area	A and B
Fair to satisfactory restocking area	B
[fol. 5747] Total restocking area	B

	In Grouping
Total forest area	A and B
Stand of old-growth hardwood saw timber	A and B
Stand of second-growth hardwood saw timber	B
Total stand of hardwood saw timber	A and B
Total stand of second-growth saw timber	A and B
Stand of hard cordwood on saw timber area	A and B
Stand of hard cordwood on all areas	B
Total stand of all hardwood timber	B

The Official territory leads in:

	In Grouping
Fair to satisfactory restocking area	A
Poor to non-restocking area	A
Total restocking area	A
Stand of second-growth hardwood saw timber	A
Stand of hard cordwood on cordwood area	A and B
Stand of soft cordwood on restocking area	A and B
Stand of hard cordwood on restocking area	A and B
Total stand of cordwood on restocking area	A and B
Stand of hard cordwood on all areas	A
Total stand of all hardwood timber	A

The Western Trunk Line territory is first in "poor to non-restocking area" in Grouping B. The Southwestern territory does not lead in any of the classifications of forest area or stand of timber. (See Table 83).

The ranking of freight rate territories in the total forest area and in the total stands of softwoods and hardwoods indicates that the Southern territory is first in the total forest area (128 million acres in Grouping A and 158 million acres in Grouping B, or about one-third of the total commercial forest area in the United States). This terri-

(Here follows 1 Photolithograph, side folio 5748)

Table 83.—Ranking of Freight Rate Territories in Forest Area and Stand of Timber, 1938

	Territory									
	Official Grouping		Southern Grouping		Western Trunk Line Grouping		South-western Grouping		Mountain-Pacific Grouping	
	A	B	A	B	A	B	A	B	A	B
Forest Area										
Old-growth saw-timber area	3	3	2	2	5	5	4	4	1	1
Second-growth saw-timber area	2	2	1	1	5	5	3	3	4	4
Total saw-timber area	3	3	2	2	5	5	4	4	1	1
Cordwood area	2	2	1	1	4	3	5	5	3	4
Fair to satisfactory restocking area	1	3	2	1	3	2	5	5	4	4
Poor to non-restocking area	1	4	2	2	3	1	5	5	4	3
Total restocking area	1	3	2	1	3	2	5	5	4	4
Total forest area	3	3	1	1	4	4	5	5	2	2
Stand of Saw Timber 1/										
Old-growth softwoods	3	3	2	2	5	4	4	5	1	1
Second-growth softwoods	4	4	2	2	5	5	3	3	1	1
Total softwoods	3	3	2	2	5	5	4	4	1	1
Old-growth hardwoods	2	3	1	1	4	2	3	4	5	5
Second-growth hardwoods	1	2	2	1	4	3	3	4	5	5
Total hardwoods	2	2	1	1	4	3	3	4	5	5
Total old-growth	3	4	2	2	5	3	4	5	1	1
Total second-growth	3	3	1	1	5	5	4	4	2	2
Total stand of saw timber	3	3	2	2	5	5	4	4	1	1
Stand of Cordwood 2/										
Soft cordwood on saw-timber area	3	4	2	2	5	5	4	3	1	1
Hard cordwood on saw-timber area	2	2	1	1	4	3	3	4	5	5
Total cordwood on saw-timber area	3	3	2	2	5	4	4	5	1	1
Soft cordwood on cordwood area	3	3	2	2	4	4	5	5	1	1
Hard cordwood on cordwood area	1	1	3	3	2	2	4	4	5	5
Total cordwood on cordwood area	2	2	3	3	4	4	5	5	1	1
Soft cordwood on restocking area	1	1	2	2	3	3	5	5	4	4
Hard cordwood on restocking area	1	1	4	3	2	2	3	4	5	5
Total cordwood on restocking area	1	1	3	3	2	2	4	4	5	5
Soft cordwood on all areas	3	3	2	2	5	4	4	5	1	1
Hard cordwood on all areas	1	2	2	1	4	3	3	4	5	5
Total stand of cordwood on all areas	2	3	3	2	5	4	4	5	1	1
Total stand of Timber 3/										
Softwood	3	3	2	2	5	5	4	4	1	1
Hardwood	1	2	2	1	4	3	3	4	5	5
Total stand of all timber	3	3	2	2	5	4	4	5	1	1

1/ As measured in board feet.
2/ As measured in cords.
3/ As measured in cubic feet.

Source: Based on Tables 78-82.

[fol. 5749] tory also leads in the total stand of hardwoods in Grouping B (58 billion cubic feet, or two-fifths of the U. S. total stand of hardwoods), but in Grouping A it occupies second place (43 billion cubic feet, or about one-third of the U. S. total stand of hardwoods). The Southern territory ranks second in total stand of softwoods in both groupings (42 billion cubic feet in Grouping A and 50 billion cubic feet in Grouping B, or over one-tenth of the total stand of softwoods).

The Mountain-Pacific territory is second in total forest area (117 million acres in both groupings, or about one-fourth of the total forest area). This territory is outstanding in the total stand of softwoods (291 billion cubic feet in both groupings) and its softwood stand is so large (over three-fourths of the U. S. total stand of softwoods) that its combined stand of softwoods and hardwoods (295 billion cubic feet) constitutes over one-half of the total stand of timber on (commercial) forest land in the United States. Mountain-Pacific territory, to be noted, has the lowest ranking in the total stand of hardwoods. It has only slightly over 3 billion cubic feet of all hardwoods.

Official territory leads in the total stand of hardwoods in Grouping A (58 billion cubic feet) but it is second in this stand in Grouping B (45 billion cubic feet). This territory is third in the total stand of softwoods in both groupings (21 billion cubic feet and 13 billion cubic feet in Grouping A and Grouping B, respectively). It ranks also third in the total forest area in both groupings (112 million acres in Grouping A and 80 million acres in Grouping B).

Western Trunk Line territory ranks fourth in the total forest area (53 million acres in Grouping A and 74 million acres in Grouping B). In the total stand of hardwoods it is third in Grouping B (22 billion cubic feet) and fourth in Grouping A (15 billion cubic feet). Western Trunk Line territory has the lowest total stand of softwoods (6 billion cubic feet in Grouping A and 10 billion cubic feet in Grouping B).

Southwestern territory is lowest in the total forest area (52 million acres in Grouping A and 36 million acres in [fol. 5750] Grouping B). This territory is third in the total stand of hardwoods in Grouping A (23 billion cubic feet) and fourth in Grouping B (14 billion cubic feet). The Southwestern territory is also fourth in total stand of soft-

woods in both groupings (16 billion cubic feet in Grouping A and 11 billion cubic feet in Grouping B).

The ranking of freight rate territories on the basis of the distribution of the total saw-timber area and the total stands of softwood and hardwood saw timber presents a striking coincidence in the order of importance of freight rate territories in the first two items (in the total saw timber area and in the total stand of softwood saw timber) as follows:

Territory	Rank	Total saw timber area		Stand of softwood saw timber	
		Grouping A	Grouping B	Grouping A	Grouping B
		(Million acres)		(Billion bd. ft.)	
Mountain-Pacific	1	77	77	1,213	1,213
Southern	2	58	74	146	174
Official	3	39	30	62	42
Southwestern	4	30	20	56	40
Western Trunk Line	5	9	12	15	24
Total		213	213	1,493	1,493

The ranking of freight rate territories in the total stand of hardwood saw timber indicates that the Southern territory is first (98 billion board feet in Grouping A and 134 billion in Grouping B, or 36 and 50 percent of the U. S. total, respectively), and the Mountain-Pacific territory is lowest (5 billion board feet in both groupings). Official territory is second in the total stand of hardwood saw timber (90 billion board feet in Grouping A and 60 billion board feet in Grouping B). Southwestern territory is third in Grouping A (55 billion board feet) and fourth in Grouping B (22 billion board feet). Western Trunk Line, conversely, is fourth in Grouping A (30 billion board feet) and third in Grouping B (41 billion board feet).

[fol. 5751] The ranking of freight rate territories in the total stand of cordwood on all forest areas shows that Mountain-Pacific territory is the leading territory (887 million cords in both groupings, or over one-third of the total stand of cordwoods on the commercial forest area in the United States). Southern territory is second in Grouping B (655 million cords) and third in Grouping A (508 million cords). Official territory, conversely, is third in Grouping B (468 million cords) and second in Grouping A (622 million cords). Western Trunk Line territory ranks fourth in Grouping B (286 million cords) and fifth in Group-

ing A (195 million cords). And conversely, Southwestern territory ranks fourth in Grouping A (244 million cords) and fifth in Grouping B (159 million cords).

The ranking of freight rate territories in the stands of soft and hard cordwoods separately on all forest areas indicates that the Mountain-Pacific territory is first in the stand of softwood cordwood (877 million cords) but its stand of hardwood cordwood is insignificant (only 10 million cords). Southern territory ranks second in the stand of softwood cordwood (188 million cords in Grouping A and 228 million cords in Grouping B) and it is first in the stand of hardwood cordwood in Grouping B (426 million cords). Official territory is third in the stand of softwood cordwood (122 million cords in Grouping A and 75 million cords in Grouping B) and first in the stand of hardwood cordwood in Grouping A (500 million cords). Western Trunk Line territory ranks fourth in the stand of softwood cordwood in Grouping B and fifth in Grouping A. It is third in the stand of hardwood cordwood in Grouping B and fourth in Grouping A. The Southwestern territory has reverse rankings in the stands of both kinds of cordwood (in Groupings A and B) as compared with the rankings of the Western Trunk Line territory (for figures see Tables 82A and 83).

Stand of Timber Per Acre of Forest Areas

The above tables (Tables 78-83) show the distribution of commercial forest areas and standing timber, by character [fol. 5752] of growth and by territories, and the ranking of territories in forest areas and stand of timber. These tables, however, do not show the relative significance of territories on the basis of their forest density (stand of timber per acre of forest areas). The measurement of forest resources on the basis of timber stand per acre of forest areas is given in Table 84. The Mountain-Pacific territory leads in the stand of timber per acre in every instance except the stands of cordwood per acre of saw timber area and of all restocking areas. The Mountain-Pacific territory has 16,860 board feet of old-growth saw timber per acre (of old-growth saw-timber area), 10,547 board feet of second-growth saw timber per acre (of second-growth saw timber area), and 15,706 board feet of the

total saw timber per acre of the total saw-timber area. It has 15.12 cords of cordwood per acre of cordwood area and 7.58 cords of the total cordwood per acre of the total forest area. This territory also has the highest stand of the total timber per acre of the total forest area, 2,519 cubic feet.

The Western Trunk Line territory ranks second in the stand of old growth saw timber per acre (6,571 board feet in Grouping A and 8,323 board feet in Grouping B) and also in the total stand of saw timber per acre (4,316 board feet in Grouping A and 5,590 board feet in Grouping B). It is also second in the stand per acre of second-growth saw timber in Grouping B (however, in Grouping A it ranks third), and in the stand of cordwood on restocking areas per acre of restocking areas. It leads in the stand of cordwood per acre of the saw timber area. However, the Western Trunk Line territory ranks lowest in the total stand of cordwood per acre of the total forest area, and in the total stand of timber per acre of the total forest area. The high density of the saw timber area of the Western Trunk Line territory is attributed to the high proportion of saw timber concentrated in a relatively small area (Michigan, Wisconsin, and Minnesota) of that territory. The low density of all timber area in the Western Trunk Line territory is due to the fact that saw-timber areas constitute only 16 percent of the total forest area of that territory.

(Here follows Photolithograph, side folio 5753)

Table 84. - Stand of Timber Per Acre of Forest Areas, by Character of Growth and by Freight Rate Territories, 1938

Stand of timber per acre	Territory										United States
	Official		Southern		Western Trunk Line		Southwestern		Mountain-Pacific		
	Grouping		Grouping		Grouping		Grouping		Grouping		
	A	B	A	B	A	B	A	B	A	B	
Old-growth saw timber on old-growth saw-timber area, board feet	5,007	3,312	5,494	5,461	6,571	8,323	5,048	4,738	16,860	15,860	12,567
Second-growth saw timber on second-growth saw-timber area, board feet	3,451	3,318	3,727	3,662	3,539	4,068	3,305	3,175	10,547	10,547	4,432
Total saw timber on total saw-timber area, bd.ft.	3,936	3,465	4,187	4,141	4,316	5.590	3,774	3,545	15,706	15,706	8,285
Cordwood on total saw-timber area, cords	7.82	6.86	6.56	5.74	8.56	11.03	6.68	6.30	7.98	7.98	7.41
Cordwood on cordwood area, cords	8.62	9.73	3.76	3.84	6.71	6.09	4.51	4.50	15.12	15.12	7.62
Cordwood on all re-stocking areas, cords .	1.52	1.92	.26	.26	.86	.67	.34	.39	.14	.14	.74
Total cordwood on total forest area, cords	5.57	5.86	3.95	4.15	3.68	4.00	4.71	4.46	7.58	7.58	5.32
Total timber on total forest area, cubic feet	710	738	660	685	406	458	757	702	2,519	2,519	1,125

Source: Based on Tables 78-82.

5753

The Southern territory is third in the stand per acre [fol. 5754]of old-growth saw timber (5,494 board feet in Grouping A and 5,461 board feet in Grouping B) and also in the total stand of saw timber per acre (4,137 board feet in Grouping A and 4,141 board feet in Grouping B) of the total saw-timber area. It is also third in the stand per acre of second-growth saw timber in Groupings B (however in Grouping A it ranks second). The Southern territory having the low density of cordwoods, especially of cordwood on cordwood area (only 3.76 cords per acre in Grouping A and 3.84 cords per acre in Grouping B), reduces its density of the total stand on the total forest area to fourth place in order of importance as compared with other territories.

The Official territory ranks lowest in the density of old-growth saw timber and next to the lowest in second-growth saw-timber. However, having the highest density of cordwoods on all restocking areas and next to the highest in cordwoods on all forest area, the Official territory raises its density of the total timber stand on the total forest area to third place in Grouping A and to second place in Grouping B.

The Southwestern territory ranks fifth (lowest) in the density of second-growth saw timber, fourth in the density of old-growth saw timber, and third in the density of cordwood on the total forest area. The Southwestern territory is second in the stand of the total timber per acre of the total forest area in Grouping A and third in Grouping B.

Stand of Saw Timber by Species

The U. S. Forest Service in the presentation of the total stand of saw timber on commercial forest by principal species divides all trees in four groups for the year 1938 (See Tables 85 and 86) as follows:

[fol. 5755]

	Billion board feet	Percent
Eastern softwoods	277	16
Eastern hardwoods	266	15
Western softwoods	1,216	69
Western hardwood	5	
Total	1,764	100

Among the principal species of Eastern softwoods are the following:

	Billion board feet	Percent
Southern yellow pine	196.8	71
Spruce and fir	24.1	9
White and red pine	18.1	7
Hemlock	17.6	6
Others	20.3	7
Total	276.9	100

Eastern hardwoods are comprised from the following principal species:

	Billion board feet	Percent
Oak	83.7	32
Birch, beech and maple	55.2	21
Red gum	27.8	10
Tupelo	20.4	8
Others	78.5	29
Total	265.6	100

Western softwoods are made up of the principal species as listed below:

	Billion board feet	Percent
Douglas fir	489.9	40
Ponderosa pine	224.9	18
True fir	121.7	10
Western hemlock	115.6	10
Others	264.1	22
Total	1,216.2	100

Western hardwoods constitute an insignificant amount, and this stand of saw timber is not classified by species (by the U. S. Forest Service).

(Here follows 2 Photolithographs, side folios 5756-5757)

Table 85.—Stand of Saw Timber on Commercial Forest Land, by Species and Freight Rate Territories, 1938

Species	Territory					United States
	Official 1/	Southern 2/	Western Trunk Line 3/	Southwestern 4/	Mountain-Pacific 5/	
	(Million board feet)					
Eastern softwoods:						
Southern yellow pine	10,757	132,127	144	53,812	-	196,840
Spruce and fir	20,615	80	3,391	-	-	24,086
White and red pine	12,508	652	4,941	-	-	18,101
Hemlock	7,271	1,240	9,041	-	-	17,552
Cypress	332	8,899	114	2,209	-	11,554
Others	2,393	3,217	2,859	336	-	8,805
Total	53,376	146,215	20,490	56,357	-	276,938
Eastern hardwoods:						
Oak	17,920	34,540	7,530	23,710	-	83,700
Birch, beech, and maple	34,813	1,110	19,255	-	-	55,178
Red gum	1,756	16,017	64	10,000	-	27,837
Tupelo	1,237	13,394	8	5,764	-	20,403
Yellow poplar	2,122	7,441	32	-	-	9,595
Cottonwood and aspen	2,589	726	3,751	969	-	8,035
Others	15,483	24,317	6,016	15,010	-	60,826
Total	75,920	97,545	36,656	55,453	-	265,574
Western softwoods:						
Douglas fir	-	-	-	-	489,905	489,905
Ponderosa pine	-	-	6/3,180	-	221,724	224,904
True fir	-	-	-	-	121,737	121,737
Western hemlock	-	-	-	-	115,551	115,551
Spruce	-	-	-	-	62,821	62,821
Redwood	-	-	-	-	39,150	39,150
Lodgepole pine	-	-	-	-	38,620	38,620
Western larch	-	-	-	-	25,306	25,306
Sugar pine	-	-	-	-	24,684	24,684
Western white pine	-	-	-	-	18,333	18,333
Others	-	-	-	-	55,171	55,171
Total	-	-	3,180	-	1,213,002	1,216,182
Western hardwoods	-	-	-	-	4,957	4,957
All species	129,796	243,760	60,326	111,810	1,217,959	1,763,651

1/ Includes all of Virginia and West Virginia, lower peninsula of Michigan, and excludes all of Wisconsin.
2/ Excludes all of Virginia and Louisiana.
3/ Includes all of Wisconsin and excludes all of Colorado. Includes western Texas and Oklahoma on which a negligible amount of timber is grown.
4/ Includes all of Louisiana and excludes western Oklahoma and Texas on which a negligible amount of timber is grown.
5/ Includes all of Colorado.
6/ Includes an insignificant amount of spruce, lodgepole pine, and other conifers.

Sources:
U. S. D.A., Forest Service, "Forest Statistics: Area, Stand, Growth and Drain" (prepared for Joint Congressional Committee on Forestry), 1939, Table 3 (processed).
U. S. Forest Service, "Stand of Saw Timber in the United States, by Character of Growth and by Regions and States [in 1938]." A table prepared for Joint Congressional Committee on Forestry, 1939 (processed).
U. S. D.A., Forest Service. Unpublished material from the office of R. D. Garver, Director of Forest Survey.

Table 86.--Stand of Saw Timber on Commercial Forest Land, by Species and Freight Rate Territories, 1938

Species	Territory					United States
	Official 1/	Southern 2/	Western Trunk Line 3/	Southwestern 4/	Mountain-Pacific 5/	
	(Percent of United States)					
stern softwoods:						
Southern yellow pine	5.46	67.13	0.07	27.34	-	100.00
Spruce and fir	85.59	.33	14.08	-	-	100.00
White and red pine	69.10	3.60	27.30	-	-	100.00
Hemlock	41.43	7.06	51.51	-	-	100.00
Cypress	2.87	77.02	.99	19.12	-	100.00
Others	27.18	36.54	32.47	3.81	-	100.00
Total	19.45	52.80	7.40	20.35	-	100.00
stern hardwoods:						
Oak	21.41	41.26	9.00	28.33	-	100.00
Birch, beech, and maple	63.09	2.01	34.90	-	-	100.00
Red gum	6.31	57.54	.23	35.92	-	100.00
Tupelo	6.06	65.65	.04	28.25	-	100.00
Yellow poplar	22.12	77.55	.33	-	-	100.00
Cottonwood and aspen	32.22	9.04	46.68	12.06	-	100.00
Others	25.45	39.98	9.39	24.58	-	100.00
Total	28.59	36.73	12.80	20.88	-	100.00
stern softwoods:						
Douglas fir	-	-	-	-	100.00	100.00
Ponderosa pine	-	-	6/ 1.41	-	98.59	100.00
True fir	-	-	-	-	100.00	100.00
Western Hemlock	-	-	-	-	100.00	100.00
Spruce	-	-	-	-	100.00	100.00
Redwood	-	-	-	-	100.00	100.00
Lodgepole pine	-	-	-	-	100.00	100.00
Western larch	-	-	-	-	100.00	100.00
Sugar pine	-	-	-	-	100.00	100.00
Western white pine	-	-	-	-	100.00	100.00
Others	-	-	-	-	100.00	100.00
Total	-	-	0.26	-	99.74	100.00
stern hardwoods	-	-	-	-	100.00	100.00
All species	7.36	13.82	3.42	6.34	69.06	100.00

Includes all of Virginia and West Virginia, lower peninsula of Michigan, and excludes all of Wisconsin.
Excludes all of Virginia and Louisiana.
Includes all of Wisconsin and excludes all of Colorado. Includes western Texas and Oklahoma on which a negligible amount of timber is grown.
Includes all of Louisiana and excludes western Oklahoma and Texas on which a negligible amount of timber is grown.
Includes all of Colorado.
Includes an insignificant amount of spruce, lodgepole pine, and other conifers.

rces:
S. D.A., Forest Service, "Forest Statistics: Area, Stand, Growth and Drain" (prepared for Joint Congressional Committee on Forestry), 1939, Table 3 (processed).
S. Forest Service, "Stand of Saw Timber in the United States, by Character of Growth and by Regions and States (in 1938)." A table prepared for Joint Congressional Committee on Forestry, 1939 (processed).
S. D.A., Forest Service. Unpublished material from the office of R. D. Garver, Director of Forest Survey.

[fol. 5758] Tables 85 and 86 on the distribution of the stand of saw timber (on commercial forest land) by species and by freight rate territories and also other tables (87 and 88) are compiled from the U. S. Forest Service tables by regions and since the Forest Service does not furnish state figures, the Tables 85-88 by freight rate territories have only one grouping of states by territories (for the details of states comprising each territory, see footnotes to Tables 85-88).

The distribution of the stand of saw timber by species (Tables 85 and 86) illustrates that the Southern freight rate territory is leading in eastern softwoods and hardwoods (53 and 37 percent, respectively). Southern yellow pine is the leader in the eastern softwoods of the Southern territory, and it contributes 90 percent to the stand of the softwood saw timber in the Southern territory. Oak contributes 35 percent and red gum 16 percent to the stand of hardwood saw timber in the Southern territory.

The Official territory ranks second in eastern hardwoods (29 percent of the total eastern hardwoods) and third in eastern softwoods (19 percent of the total eastern softwoods). Oak, birch, beech, and maple, spruce and fir, and white and red pine are the principal species in the Official territory (see Tables 85 and 86).

The Southwestern territory is second in eastern softwoods (20 percent of the total eastern softwoods) and third in eastern hardwoods (21 percent of the total of eastern hardwoods). Southern yellow pine and oak are the major trees growing in the Southwestern territory.

The Western Trunk Line territory is the lowest among the three other territories having eastern saw timber. Hemlock, oak, birch, beech, and maple are the major species in the Western Trunk Line territory.

The Mountain-Pacific territory is an outstanding area in western softwoods. This territory practically includes all western softwoods (99.7 percent). The most important species in the Mountain-Pacific territory are: Douglas fir [fol. 5759] (40 percent of the total western softwoods), ponderosa pine (18 percent), true fir (10 percent), and western hemlock (9.5 percent). Western hardwoods lying in the Mountain-Pacific territory constitute only .28 of one percent of the total stand of saw timber on commercial forest land.

Current Annual Growth

The U. S. Forest Service estimates that the total annual growth (in 1936) on commercial forest land is equal to 11.3 billion cubic feet (combined saw timber and cordwood growth). Of this volume, 5.9 billion cubic feet is softwood growth, and 5.4 billion cubic feet is hardwood growth (see Table 87). The Southern territory leads in the total growth (41 percent), softwood growth (42 percent), and hardwood growth (41 percent). The Southern territory is outstanding not only in forest acreage and stand of hardwood saw timber (for the discussion of forest acreage and stand, see preceding sections) but also in "the ease with which forests are renewed * * * [in the South and] their rapid growth."[1]

The Mountain-Pacific territory stands second in the total growth (18 percent) and in softwood growth (33 percent), but it is lowest in hardwood growth (1 percent). The Southwestern territory is third in the total softwood and hardwood growths. The Official territory ranks fourth in the total growth and softwood growth, but it is second in the hardwood growth (28 percent). The Western Trunk Line territory is rated lowest in the total growth and softwood growth but it outranks the Mountain-Pacific territory in hardwood growth.

The total saw timber growth on commercial forest lands for 1938 is 32 billion board feet, of which amount 21.2 billion board feet is softwood saw timber growth and 10.8 billion

[1] "A National Plan for American Forestry," a report on the forest problem of the United States prepared by the U. S. Forest Service, pursuant to Senate Resolution 175 (72d Cong., 1st Sess.), Vol. I, 1933, pp. 126-127.

(Here follows 1 Photolithograph, side folio 5760)

Table 87. - Current Annual Growth on Commercial Forest Areas, by Freight Rate Territories, 1938 1/

Territory	Combined saw timber and cordwood growth			Saw timber growth		
	Total	Softwood	Hardwood	Total	Softwood	Hardwood
	(Million cu. ft.)			(Million bd. ft.)		
Official 2/	1,828	348	1,480	3,603	1,163	2,440
Southern 3/	4,662	2,485	2,177	14,296	9,572	4,724
Western Trunk Line 4/	979	248	731	1,850	613	1,237
Southwestern 5/	1,833	905	928	6,107	3,738	2,369
Mountain-Pacific 6/	1,985	1,948	37	6,177	6,082	95
United States	7/ 11,287	5,934	5,353	7/ 32,033	21,168	10,865
	Percent of total					
Official 2/	16.20	5.86	27.65	11.25	5.49	22.46
Southern 3/	41.30	41.88	40.67	44.63	45.22	43.48
Western Trunk Line 4/	8.67	4.18	13.65	5.78	2.90	11.39
Southwestern 5/	16.24	15.25	17.34	19.06	17.66	21.80
Mountain-Pacific 6/	17.59	32.83	.69	19.28	28.73	.87
United States	100.00	100.00	100.00	100.00	100.00	100.00

1/ Growth figures represent volume of wood without bark, as in estimates of forest drain. Board-foot volumes are on the basis of estimated lumber tally, assuming utilization consistent with good practice in each region. The growth in cubic feet is for stem wood, including all trees 4 inches or more in diameter breast height; it includes the limbs in the hardwoods.

2/ Excluding Mich., Wisc., Va. and W. Va.; including Iowa and Missouri.

3/ Including Virginia and West Virginia; excluding Louisiana (except the extreme northeastern corner of Louisiana) and southeastern portion of Mississippi (along Mississippi River).

4/ Including Mich. and Wisc.; excluding Iowa, Mo. and southwestern portion of S. Dak.; negligible amounts for N. Dak., Nebr., Kans., and for remaining portion of S. Dak. not reported.

5/ Including La. (except an extreme northeastern corner of La.) and southwestern portion of Miss. (along Miss. River); negligible amounts for eastern portions of Oklahoma and Texas not reported.

6/ Including Colorado and southwestern portion of South Dakota.

7/ The effective growth is estimated at 9.6 billion cubic feet, including 27.5 billion board feet of saw-timber.

Source: U. S. Forest Service, "Forest Statistics: Area, Stand, Growth, and Drain" (prepared for Joint Congressional Committee on Forestry), 1939. Table 11 (processed).

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[fol. 5761] board feet is hardwood growth. Freight rate territories have precisely the same ranking in saw timber growths as in combined saw timber and cordwood growths (for percentages, see Table 87).

Current Annual Growth and Drain

The latest data on the total annual growth and drain (from logging and destructive agencies) of standing total timber on commercial forest land (for 1936) show that the drain is 13.5 billion cubic feet (combined saw timber and cordwood) and the growth is 11.3 billion cubic feet (see Table 88). The ratio of drain to growth for these data is 1.2. The Mountain-Pacific territory has the highest ratio (1.8) and the Southwestern territory has the lowest ratio (0.9). The ratio for the Official territory is 1.2, for Southern territory is 1.1, and the ratio for the Western Trunk Line is 1.

The annual saw timber growth on commercial forest land (for 1936) is 32 billion board feet and the annual drain (for the same year) is 47.8 billion board feet. The ratio of drain to growth for these data is 1.5. The Mountain-Pacific territory has the highest ratio of this kind (2.8) and Southwestern territory has the lowest ratio (1.1). The Official and Southern territories have the ratio 1.2, and the Western Trunk Line territory has the ratio 1.3.

Messrs. Marsh and Gibbons of the United States Forest Service, referring to the relation of current growth to drain, remark:

> "Although current growth approaches current drain more closely than it has since man began extensive use, the situation is actualy less favorable than the growth-drain comparisons * * * indicate. Not all of the growth is effective. Cutting, for the most part, takes the better trees, while most of the growth is in inferior species or small, low-quality tres. Much of the drain is concentrated locally, and forest industries continue to cut out and close down * * *

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Table 66. - Current Annual Growth and Drain, by Freight Rate Territories, 1936

Territory	Combined saw timber and cordwood			Saw timber			
	Growth	Drain	Ratio, drain to growth	Growth	Drain	Ratio, drain to growth	Saw timber cut for lumber
	(Million cu. ft.)			(Mil. bd. ft.)			(Mil. bd. ft.)
Official 1/	1,828	2,277	1.2	3,603	4,249	1.2	1,147
Southern 2/	4,662	4,990	1.1	14,296	17,163	1.2	9,383
Western Trunk Line 3/	979	983	1.0	1,850	2,420	1.3	1,307
Southwestern 4/	1,833	1,699	0.9	6,107	6,479	1.1	3,894
Mountain-Pacific 5/	1,985	3,514	1.8	6,177	17,497	2.8	11,672
United States	11,287	13,463	1.2	32,033	47,808	1.5	27,703
	Percent of total						
Official 1/	16.20	16.91	-	11.25	8.89	-	5.22
Southern 2/	41.30	37.07	-	44.63	35.90	-	33.87
Western Trunk Line 3/	8.67	7.30	-	5.78	5.06	-	4.72
Southwestern 4/	16.24	12.62	-	19.06	13.55	-	14.06
Mountain-Pacific 5/	17.59	26.10	-	19.28	36.60	-	42.13
United States	100.00	100.00	-	100.00	100.00	-	100.00

1/ Excluding Michigan, Wisconsin, Virginia and West Virginia; including Iowa and Missouri.

2/ Including Virginia and West Virginia; excluding Louisiana (except the extreme northeastern corner of Louisiana) and southeastern portion of Mississippi (along Mississippi River).

3/ Including Michigan and Wisconsin; excluding Iowa, Missouri, and southwestern portion of South Dakota; negligible amounts for North Dakota, Nebraska, Kansas and for remaining portion of South Dakota not reported.

4/ Including La. (except the extreme northeastern corner of La.) and southwestern portion of Mississippi (along Mississippi River); negligible amounts for eastern portions of Okla. and Texas not reported.

5/ Including Colorado and southwestern portion of South Dakota.

Source: U. S. Forest Service, "Forest Statistics: Area, Stand, Growth, and Drain" (prepared for Joint Congressional Committee on Forestry), 1939, Table [12] (processed).

[fol. 5763] "The high ratios of drain to growth in the West are less significant than they would otherwise be because of the large quantities of virgin timber which permit a certain excess of cutting. It appears, however, that the present stand of economically available timber is less than the regulated growing stock necessary to sustain the current rate of saw-timber utilization.

"The saw-timber stands in the East have only about two-thirds of the volume needed to sustain the current annual saw-timber drain. * * *"[1]

Future Timber Requirements

In connection with the future timber requirements, the same authorities state:

"No one can say with assurance just how much wood we shall use at any future time—even within the next decade, not to mention 50 or 100 years hence. Equally indeterminate is the amount of timber that we shall supply to other countries. Yet a sound program of forestry must aim to anticipate future domestic requirements and foreign demands with some degree of probability.

"Among the factors that will influence the amount of timber we can consume or dispose of is the timber supply itself. An abundance of timber of the desired character and quality, available at low cost, would make for larger consumption; competition from other materials would be reduced, as wood would tend to replace more costly and less accessible materials. On the other hand, scarcity, poor quality and high prices would make for less consumption. This is one reason why utiliza- [fol. 5764] tion of the great quantity of inferior materials now present in our forests constitutes a serious problem.

"Another important factor is the ability of people to purchase. For example, bringing the average quality of the buildings on the 3 million farms in the South to a decent level will depend in large measure on the ability of the farmers to purchase lumber. Higher

[1] Marsh and Gibbons, supra, p. 481.

standards of living and greater prosperity would unquestionably make for greater consumption of timber.

"There are also great possibilities for developing new uses and products, particularly through chemical processes. Although wood is by no means a stranger in the chemical-utilization field, it is still largely used, except for shaping by manufacture, in substantially the form in which nature produces it. But even so, many of our present uses of wood have developed during this century. Equally revolutionary changes in wood utilization may be expected in the future, with resultant increase in consumption, although certain present uses may decline."[1]

[fol. 5765] Chapter VI

Rate Territory Distribution of Human Resources

Total and Gainfully Employed Poupulation

No consideration of the distribution of the resources of the various freight rate territories can possibly be regarded as complete without some discussion of those resources represented by the population for whose benefit all other natural resources are utilized and whose well-being is so largely dependent thereon. As the National Resources Board remarks,

"Finally, human resources and human values are more significant than the land, water, and minerals on which men are dependent. The application of engineering and technological knowledge to the reorganization of the natural resources of the Nation is not an end in itself, but is to be conceived as a means of progressively decreasing the burdens imposed upon labor, raising the standard or living, and enhancing the well-being of the masses of the people."[1]

Table 89 shows for 1930 the total population of the United States and the total population ten years of age and over

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[1] Ibid., pp. 481-482.

[1] National Resources Board, A Report on National Planning and Public Works in Relation to Natural Resources and Including Land Use and Water Resources with Findings and Recommendations, 1934, p. V.

gainfully employed, each being distributed according to the A and B state groupings heretofore employed for the five freight rate terrtories. In both groupings Official classification territory contained slightly over 50 percent of the population of ten years of age and over gainfully employed. The same is true of the total population in the A grouping but by the B grouping this area shows just under 50 percent of the total. Southern territory ranks second with between 15 and 19 percent of both the total population and the population of ten years of age and over gain-

Table 89. Distribution of Total Population and of the Gainfully Employed Ten Years of Age and Above, by Freight Rate Territories, 1930

Freight rate territory	Total population		Gainfully occupied 10 years old and over	
	Number	Percent of total	Number	Percent of total
Grouping A				
Official 1/	63,293,101	51.55	25,833,072	52.91
Southern 2/	19,172,972	15.62	7,326,486	15.00
Western Trunk Line 3/ ..	16,235,921	13.22	6,182,298	12.66
Southwestern 4/	12,176,830	9.92	4,518,232	9.25
Mountain-Pacific 5/	11,896,222	9.69	4,969,832	10.18
Total	122,775,046	100.00	48,829,920	100.00
Grouping B				
Official 6/	60,871,250	49.58	24,952,861	51.10
Southern 7/	23,696,416	19.30	9,022,313	18.48
Western Trunk Line 8/ ..	17,271,712	14.07	6,585,165	13.49
Southwestern 9/	10,075,237	8.21	3,702,616	7.58
Mountain-Pacific 10/ ...	10,860,431	8.84	4,566,965	9.35
Total	122,775,046	100.00	48,829,920	100.00

1/ Including Michigan and Virginia.
2/ Excluding Virginia and Louisiana.
3/ Including Wisconsin and excluding Colorado.
4/ Including Louisiana.
5/ Including Colorado.

6/ Including Michigan.
7/ Including Virginia and Louisiana.
8/ Including Wisconsin and Colorado.
9/ Excluding Louisiana.
10/ Excluding Colorado.

Source: U. S. Department of Commerce, Bureau of the Census, Abstract of the Fifteenth Census of the United States, 1930, pp. 10-11 and 321-322.

[fol. 5767] fully employed. Western Trunk Line ranks slightly below Southern territory in its proportion of both totals, followed by the Mountain-Pacific and Southwestern areas in the order named.

The relative importance of the different kinds and classes of employment within these freight rate territories shows very substantial variations. On the other hand, though there are some differences in the proportions of the population gainfully employed and the total population in each of these areas, these differences do not appear to be either striking or significant. Throughout the discussion, therefore, the figures for the different subgroups and subclasses of gainfully employed persons in the different territories have been compared only with the total gainfully employed within such areas and not with the total populations living therein.

Major Occupations

Table 90 presents the distribution of the total population gainfully employed for the major Census classifications of occupations acording to freight rate territories. Except for agriculture and forestry and fishing, Official territory shows a higher proportion of persons living within its boundaries in each of the occupations listed than of the total gainfully employed. On the other hand, much higher proportions of persons engaged in agriculture and in forestry and fishing are found in the South than of the total gainfully employed and lower proportions of the other activities excepting only domestic and personal service. Western Trunk Line and Southwestern territories show, of course, much higher proportions of the United States totals engaged in agriculture than of the total gainfully employed in those territories. The reverse is true of the Mountain and Pacific area. This last area also employs a strikingly higher proportion of the total persons in fishing and forestry (approximately 30 percent) as compared with the total of gainfully employed in the country (from 9 to 10 percent). It is perhaps worth noting as bearing upon the diversification of industry however, that Official territory showed a larger proportion of persons engaged in agriculture than any other area except Southern territory and, on

Table 90.--Distribution of the Total Gainfully Employed Population Ten Years of Age and Over, by Major Census Industry Groupings and by Freight Rate Territories, 1930

Territory	Agriculture	Forestry and fishing	Extraction of minerals	Manufacturing and mechanical industries	Transportation and communication	Trade	Public service (not elsewhere classified)	Professional service	Domestic and personal service	Clerical occupations	Gainfully occupied 10 yrs. old and over
Grouping A											
Official 1/	2,447,512	76,984	591,283	9,347,928	2,189,742	3,466,199	510,885	1,830,795	2,669,109	2,702,635	28,833,072
Southern 2/	3,261,243	50,117	117,640	1,445,952	414,832	601,056	85,517	324,898	765,858	259,373	7,326,486
Western Trunk Line 3/	1,987,061	18,406	56,407	1,367,407	495,223	780,283	82,756	434,182	535,807	424,766	6,182,298
Southwestern 4/	1,828,820	29,000	90,529	762,079	323,834	490,415	68,513	242,933	459,430	222,679	4,518,232
Mountain-Pacific 5/	947,362	75,962	128,464	1,187,286	419,516	743,514	108,534	421,076	522,247	415,871	4,969,832
Total	10,471,998	250,469	984,323	14,110,652	3,843,147	6,081,467	856,205	3,253,884	4,952,451	4,025,324	48,829,920
Percent of total											
Official 1/	23.37	30.73	60.07	66.25	56.98	57.00	59.67	56.26	53.89	67.14	52.91
Southern 2/	31.14	20.01	11.95	10.25	10.79	9.88	9.99	9.99	15.46	6.45	15.00
Western Trunk Line 3/	18.98	7.35	5.73	9.69	12.88	12.83	9.66	13.34	10.82	10.55	12.66
Southwestern 4/	17.46	11.58	9.20	5.40	8.43	8.06	8.00	7.47	9.28	5.53	9.25
Mountain-Pacific 5/	9.05	30.33	13.05	8.41	10.92	12.23	12.68	12.94	10.55	10.33	10.18
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Grouping B											
Official 6/	2,176,816	65,626	575,277	9,135,073	2,119,120	3,383,617	485,219	1,782,128	2,573,878	2,656,107	24,952,861
Southern 7/	3,828,740	74,863	140,781	1,813,696	553,515	763,324	122,539	410,100	966,101	348,654	9,022,313
Western Trunk Line 8/	2,093,129	19,656	73,895	1,444,141	530,097	835,040	89,454	467,674	577,057	455,022	6,585,165
Southwestern 9/	1,532,019	15,612	83,394	607,190	255,773	410,729	57,157	206,398	354,418	179,926	3,702,616
Mountain-Pacific 10/	841,294	74,712	110,976	1,110,552	384,642	688,757	101,836	387,584	480,997	385,615	4,566,965
Total	10,471,998	250,469	984,323	14,110,652	3,843,147	6,081,467	856,205	3,253,884	4,952,451	4,025,324	48,829,920
Percent of total											
Official 6/	20.79	26.20	58.44	64.74	55.14	55.64	56.67	54.77	51.97	65.99	51.10
Southern 7/	36.56	29.89	14.30	12.85	14.40	12.55	14.31	12.61	19.51	8.66	18.48
Western Trunk Line 8/	19.99	7.85	7.51	10.24	13.79	13.73	10.45	14.37	11.65	11.30	13.49
Southwestern 9/	14.63	6.23	8.47	4.30	6.66	6.75	6.68	6.34	7.16	4.47	7.58
Mountain-Pacific 10/	8.03	29.83	11.28	7.87	10.01	11.33	11.89	11.91	9.71	9.58	9.35
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

1/ Including Michigan and Virginia.
2/ Excluding Virginia and Louisiana.
3/ Including Wisconsin and excluding Colorado.
4/ Including Louisiana.
5/ Including Colorado.
6/ Including Michigan.
7/ Including Virginia and Louisiana.
8/ Including Wisconsin and Colorado.
9/ Excluding Louisiana.
10/ Excluding Colorado.

Source: U. S. Department of Commerce, Bureau of the Census, Abstract of the Fifteenth Census of the United States, 1930, pp. 323-324. Last column - ibid. pp. 321-322.

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[fol. 5769] the basis of the A grouping, a larger proportion of the total engaged in forestry and fishing than any other area. On the basis of the B grouping, it was between 3 and 4 points percent below both the Southern and Mountain-Pacific areas in the latter occupational grouping.

For the remaining occupations Western Trunk Line territory shows slightly higher or slightly lower proportions of persons than of the total gainfully employed. Except for the extraction of minerals, where its proportions of the United States total (5.73 percent in the A and 7.51 percent in the B grouping) are greatly below those of the total gainfully employed (12.66 and 13.49 percent by the A and B groupings respectively) the differences are scarcely large enough to warrant any comment.

Owing to its high proportion of the total persons gainfully employed in agriculture, the other occupations in Southwestern territory most frequently employ lower proportions of the United States totals for these occupations than of the total of the country's gainfully employed as a whole. Qualifications of this generalization are found in the forestry and fishing and in the domestic and personal services occupations in the A grouping and in the extraction of minerals in the B grouping. Despite its high degree of employment in forestry and fishing, Mountain-Pacific territory shows higher proportions of employment in most of the other occupations by one or the other of the groupings than its proportion of the total gainfully employed. Qualifications are agriculture and the manufacturing and mechanical industries in both groupings.

Social-Economic Groupings

In one of its special studies the Bureau of the Census has rearranged the occupational figures for the 1930 Census into so-called social-economic groupings [1] and these regroup- [fol. 5770] ings of the Census figures have been utilized in this section for analyzing the more important occupational differences between the rate territories.

This census study subdivides the gainful workers into the following major classes: (1) professional persons, (2)

[1] Alba M. Edwards, statistician for occupations, A Social-Economic Grouping of the Gainful Workers of the United States, Bureau of the Census, 1938.

proprietors, managers, and officials, (3) clerks and kindred workers, (4) skilled workers and foremen, (5) semi-skilled workers, and (6) unskilled workers. Tables 91 and 92 distribute the total gainfully employed population of 10 years of age and over in each of the freight rate territories according to these major groupings. In 1930 the proportions of (1) clerks and kindred workers, (2) skilled workers and foremen, and (3) semi-skilled workers in Official territory were very much greater than the proportion of the total population of the country which was gainfully employed within this area. In excess of 60 percent of the total number of persons in the United States in each of these three occupations were located in Official classification territory as compared with slightly over 50 percent of the total gainfully employed in the United States living within that area. Of professional persons, the proportion living in Official classification territory is substantially below the proportion of each of the three above mentioned classes though somewhat above the proportion of the total gainfully employed. In the case of the proprietor, manager, and official and the unskilled worker group, on the other hand, Official territory's proportion of the United States total is appreciably lower than its proportion of the total gainfully employed in the United States.

Approximately the reverse of this situation is found in both the Southern and Southwestern territories. The proportion of the total of proprietors, managers, and officials and of unskilled labor living in each of these territories is higher than the corresponding proportions of the total population gainfully employed in these areas, whereas the proportions of the clerical and kindred worker, skilled worker and foremen, and semi-skilled worker groups are lower. Also in these territories the proportion of professional persons is lower than is the proportion of all gainfully employed living in the area, again in contrast with the situation in Official territory.

(Here follow 2 Photolithographs, side folios 5771-5772)

Table 91.--Total Gainful Workers, Distributed by Social-Economic Groups and by Freight Rate Territories, 1930

Grouping A

Territory	Professional persons	Proprietors, managers, and officials 1/	Clerks and kindred workers	Skilled workers and foremen	Semi-skilled workers 2/	Unskilled workers 3/	Gainfully occupied 10 yrs. old and over
Official 4/	1,657,791	3,503,982	4,952,739	4,029,401	5,332,579	6,356,580	25,833,072
Southern 5/	297,407	2,110,251	622,480	531,163	814,673	2,950,512	7,326,486
Western Trunk Line 6/	393,229	1,747,728	937,588	671,594	747,268	1,684,891	6,182,298
Southwestern 7/	222,250	1,387,532	523,711	383,078	399,206	1,602,455	4,518,232
Mountain-Pacific 8/	375,120	916,047	912,937	667,451	683,846	1,414,431	4,969,832
Total	2,945,797	9,665,540	7,949,455	6,282,687	7,977,572	14,008,869	48,829,920
Percentage of total							
Official 4/	56.28	36.25	62.30	64.14	66.85	45.38	52.91
Southern 5/	10.10	21.83	7.83	8.45	10.21	21.06	15.00
Western Trunk Line 6/	13.35	18.08	11.80	10.69	9.37	12.03	12.66
Southwestern 7/	7.54	14.36	6.59	6.10	5.00	11.43	9.25
Mountain-Pacific 8/	12.73	9.48	11.48	10.62	8.57	10.10	10.18
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

1/ Includes farmers (owners and tenants), wholesale and retail dealers, and other proprietors, managers, and officials.
2/ Includes semi-skilled workers in manufacturing and other semi-skilled workers.
3/ Includes farm laborers, factory and building construction laborers, other laborers, and servant classes.
4/ Including Michigan and Virginia.
5/ Excluding Virginia and Louisiana.
6/ Including Wisconsin and excluding Colorado.
7/ Including Louisiana.
8/ Including Colorado.

Source: U. S. Department of Commerce, Bureau of the Census, A Social-Economic Grouping of the Gainful Workers of the United States, 1930, pp. 46-49; except for last column (Gainfully occupied) from U.S. Dept. of Commerce, Bureau of the Census, Abstract of the Fifteenth Census of the United States, 1930, pp. 321-322.

Table 92.--Total Gainful Workers, Distributed by Social-Economic Groups and by Freight Rate Territories, 1930

Territory	Grouping B: Professional persons	Proprietors, managers, and officials 1/	Clerks and kindred workers	Skilled workers and foremen	Semi-skilled workers 2/	Unskilled workers 3/	Gainfully occupied 10 yrs. old and over
Official 4/	1,613,355	3,300,715	4,855,425	3,938,297	5,210,604	6,034,465	24,952,861
Southern 5/	374,800	2,518,886	807,836	688,434	1,020,049	3,612,258	9,022,313
Western Trunk Line 6/	423,310	1,840,607	1,004,219	716,450	792,934	1,807,645	6,585,165
Southwestern 7/	189,293	1,182,164	435,619	316,911	315,805	1,262,824	3,702,616
Mountain-Pacific 8/	345,039	323,168	846,306	622,595	638,180	1,291,677	4,566,965
Total	2,945,797	9,665,540	7,949,455	6,282,687	7,977,572	14,008,869	48,829,920
Percentage of total							
Official 4/	54.77	34.15	61.08	62.69	65.31	43.08	51.10
Southern 5/	12.72	26.06	10.16	10.96	12.79	25.79	18.48
Western Trunk Line 6/	14.37	19.04	12.63	11.40	9.94	12.90	13.49
Southwestern 7/	6.43	12.23	5.48	5.04	3.96	9.01	7.58
Mountain-Pacific 8/	11.71	8.52	10.65	9.91	8.00	9.22	9.35
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

1/ Includes farmers (owners and tenants), wholesale and retail dealers, and other proprietors, managers, and officials.
2/ Includes semi-skilled workers in manufacturing and other semi-skilled workers.
3/ Includes farm laborers, factory and building construction laborers, other laborers, and servant classes.
4/ Including Michigan.
5/ Including Virginia and Louisiana.
6/ Including Wisconsin and Colorado.
7/ Excluding Louisiana.
8/ Excluding Colorado.

Source: U.S. Department of Commerce, Bureau of the Census, A Social-Economic Grouping of the Gainful Workers of the United States, 1930, pp. 46-49; except for last column (Gainfully occupied) from U.S. Dept. of Commerce, Bureau of the Census, Abstract of the Fifteenth Census of the United States, 1930, pp. 321-322.

[fol. 5773] On the basis of both the A and B groupings, Western Trunk Line territory shows higher proportions of professional persons and proprietors, managers and officials than of the total gainfully employed but lower proportions for the remaining four of the six classes.

Mountain-Pacific territory shows higher proportions of professional persons, clerks and kindred workers, and skilled workers and foremen than of its total gainfully employed regardless of which groupings is involved. For the remaining classes, the proportion is lower but in nearly all the six groupings the proportion of persons in the major classes of employment within this area vary only narrowly from the proportion of the total gainfully employed.

Professional Persons

The greatest discrepancies in the distribution of professional persons as compared with the distribution of the total gainfully employed occur in Official and Southern territories. The former area shows about 3 points percent higher proportion of professional persons than of the gainfully employed population and the latter area from 5 to 7 points percent less than the proportion of the gainfully employed population depending on the grouping used. The proportion of professional persons of Western Trunk Line territory coincides closely with the proportion of the gainfully employed population living in this area, the difference being less than 1 point percent in either of the comparisons. Although, as indicated previously, Southwestern territory is like Southern territory in that its proportion of professional people is less than its proportion gainfully employed, the discrepancy is less than in Southern territory. Similarly, although Mountain-Pacific territory resembles Official territory in showing higher proportions of professional people than of the total gainfully employed, the excess is somewhat less than that of Official territory by about 1 point percent. Largely because of the rather close correspondence of the distribution of professional persons with the total gainfully employed, no distribution of this group by particular professions has been made. It is also true that a number of the large classes in this [fol. 5774] group are significant primarily from a social rather than from an economic point of view. For example, of the total of a little less than 3 million professional

persons, over 1 million are teachers, nearly 300,000 are trained nurses, nearly 150,000, clergymen, and over 150,000 lawyers, judges and justices.[1]

Proprietors, Managers, and Officials

Tables 93 and 94 present a distribution of the principal classes of proprietors, managers and officials according to the Census groupings, the principal classes being selected on the basis of the fact that the occupations shown included not less than 150,000 persons in 1930, excluding restaurant, cafe and lunchroom keepers. Farm owners and tenants far outrank any other major grouping in the proprietor, manager and official occupational classification both in total and in almost every freight rate territory. Except in the Mountain-Pacific division and in Grouping A of the Southwestern territory there are more than one million farmers in each of the four freight rate territories. In all territories combined farmers aggregated 6,012,012 persons out of a total of 9,665,540 classified as proprietors, managers and officials by the Census study or 62.2 percent of the total.

The fact that the Southern, Western Trunk Line, and Southwestern rate territories show substantially higher proportions of proprietors, managers, and officials than of the total gainfully employed in these areas is accounted for primarily by the importance of the farmers included in the former category.

In these three territories the overwhelming proportion of the proprietor, manager and official group are engaged in agriculture either as farm owners or tenants. Southern rate territory includes an appreciably higher proportion of the total farm owners and tenants of the United States than does any other rate area, slightly less than one-third by the A grouping and slightly over one-third by the B grouping. Official territory ranks second among the rate territories in the number and proportion of the total farmers

[1] A Social-Economic Grouping of the Gainful Workers of the United States, op. cit., p. 3.

(Here follow 2 Photolithographs, side folios 5775-5776)

Table 93.--Distribution of the Principal Classes of Proprietors, Managers, and Officials, by Freight Rate Territories, 1930

Grouping A

Territory	Farm owners and tenants	Building and building contractors	Manufacturing managers and officials	Manufacturers	Bankers, brokers and money lenders	Retail dealers	All proprietors, managers, and officials*	Gainfully occupied 10 years old and over
Official 1/	1,426,222	100,240	198,700	132,823	122,045	969,411	3,503,982	25,833,072
Southern 2/	1,750,616	11,074	28,982	16,722	16,949	181,954	2,110,251	7,326,486
Western Trunk Line 3/	1,275,684	22,560	36,161	22,818	32,106	215,788	1,747,728	6,182,398
Southwestern 4/	1,084,018	11,171	20,028	12,114	18,964	149,378	1,387,532	4,518,232
Mountain-Pacific 5/ .	475,472	22,467	28,885	23,424	31,440	186,991	916,047	4,969,832
Total	6,012,012	167,512	312,756	207,901	221,504	1,703,522	9,665,540	48,829,920
	Percentage of total							
Official 1/	23.72	59.84	63.53	63.89	55.10	56.90	36.25	52.91
Southern 2/	29.12	6.61	9.27	8.04	7.65	10.68	21.83	15.00
Western Trunk Line 3/	21.22	13.47	11.56	10.97	14.50	12.67	18.08	12.66
Southwestern 4/	18.03	6.67	6.40	5.83	8.56	8.77	14.36	9.25
Mountain-Pacific 5/ .	7.91	13.41	9.24	11.27	14.19	10.98	9.48	10.18
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

* Includes farmers (owners and tenants), wholesale and retail dealers, and other proprietors, managers, and officials.
1/ Including Michigan and Virginia.
2/ Excluding Virginia and Louisiana.
3/ Including Wisconsin and excluding Colorado.
4/ Including Louisiana.
5/ Including Colorado.

Source: U.S. Department of Commerce, Bureau of the Census, Fifteenth Census of the United States: 1930, Population, Vol. IV, Occupations, by States, U.S. summery, Table 3; individual states, Table 4; except for last column (Gainfully occupied) from U.S. Dept. of Commerce, Bureau of the Census, Abstract of the Fifteenth Census of the United States, 1930, pp. 321-322; and next to last column (All proprietors) from U.S. Dept. of Commerce, Bureau of the Census, A Social-Economic Grouping of the Gainful Workers of the United States, 1930, pp. 46-49.

Table 94.--Distribution of the Principal Classes of Proprietors, Managers, and Officials, by Freight Rate Territories, 1930

Grouping B

Territory	Farm owners and tenants	Building and building contractors	Manufacturing managers and officials	Manufacturers	Bankers, brokers and money lenders	Retail dealers	All proprietors, managers, and officials*	Gainfully occupied 10 yrs. old and over
Official 1/	1,275,758	98,171	194,651	130,577	119,623	943,634	3,300,715	24,952,861
Southern 2/	2,059,900	14,383	36,412	20,634	21,810	231,772	2,518,886	9,022,313
Western Trunk Line 3/ ..	1,334,017	24,011	38,338	24,240	34,635	230,493	1,840,607	6,585,165
Southwestern 4/	925,198	9,931	16,647	10,448	16,525	125,337	1,182,164	3,702,616
Mountain-Pacific 5/	417,139	21,016	26,708	22,002	28,911	172,286	823,168	4,566,965
Total	6,012,012	167,512	312,756	207,901	221,504	1,703,522	9,665,540	48,829,920
Percentage of total								
Official 1/	21.22	58.60	62.23	62.81	54.00	55.39	34.15	51.10
Southern 2/	34.26	8.59	11.64	9.92	9.85	13.61	26.06	18.48
Western Trunk Line 3/ ..	22.19	14.33	12.26	11.66	15.64	13.53	19.04	13.49
Southwestern 4/	15.39	5.93	5.33	5.03	7.46	7.36	12.23	7.58
Mountain-Pacific 5/	6.94	12.55	8.54	10.58	13.05	10.11	8.52	9.35
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

* Includes farmers (owners and tenants), wholesale and retail dealers, and other proprietors, managers, and officials.
1/ Including Michigan.
2/ Including Virginia and Louisiana.
3/ Including Wisconsin and Colorado.
4/ Excluding Louisiana.
5/ Excluding Colorado.

Source: U.S. Department of Commerce, Bureau of the Census, Fifteenth Census of the United States: 1930, Population, Vol. IV, Occupations, by States, U.S. summary, Table 3; individual states, Table 4; except for last column (Gainfully occupied) from U.S. Dept. of Commerce, Bureau of the Census, Abstract of the Fifteenth Census of the United States, 1930, pp. 321-322; and next to last column (All proprietors) from U.S. Dept. of Commerce, Bureau of the Census, A Social-Economic Grouping of the Gainful Workers of the United States, 1930, pp. 46-49.

[fol. 5777] of the United States included within its boundaries on the basis of the A grouping though it is third or slightly below Western Trunk Line territory in the B grouping. Although its proportion of the total farm owners and tenants of the United States is a little less than one-half of its proportion of the total gainfully employed, Official territory nonetheless ranks very much above either the Southwestern or the Mountain-Pacific areas in its number of farmers and is even with the great Western Trunk Line agricultural area in this respect. (See also Chapter IV)

In the occupational subclasses of the proprietor, manager and official group other than farmers, Official territory includes much higher proportions of the United States totals for these occupations than any other rate area; also substantially higher proportions of each of these classes than of the total gainfully employed in this rate territory. Except for the Mountain-Pacific division, the reverse tends to be true of the other territories largely as a result of the relatively heavier weighting of the proprietor, manager, and official group as a whole by farmers in the Southern, Western Trunk Line, and Southwestern areas as compared with either Official or Mountain-Pacific territory. The two latter show a much lower proportion of farmers than of proprietors, managers and officials as a whole and higher proportions of the other subclasses except for manufacturing managers and officials in the case of Mountain-Pacific territory.

Farm Owners and Tenants.

The heavy weighting of the proprietor, manager and official group by farmers as well as the importance of this relatively homogeneous agricultural group in the total gainfully employed figures appears to justify a further analysis of the composition of this occupation. This is shown in Tables 95 and 96.

According to these tables a larger number and proportion of all full owners of farms are located in Official classification territory than in any other of the four rate territories. Not only is this true but this territory is exceeded

Table 95.--Distribution of Farm Operators, by Tenure of Operator and by Freight Rate Territories, 1930

Grouping A

Territory	Full owners.	Part owners	Managers	Tenants			Total farm operators	Gainfully occupied 10 yrs. old and over
				Cash*	Croppers**	Other*		
Official 1/	1,023,114	161,809	19,345	92,022	20,958	256,280	1,573,528	25,833,072
Southern 2/	664,955	115,504	8,470	158,987	504,681	361,820	1,814,417	7,326,486
Western Trunk Line 3/ ..	590,548	217,554	9,130	135,363	-	341,927	1,294,522	6,152,298
Southwestern 4/	325,989	84,408	5,506	62,319	250,639	374,273	1,103,134	4,518,232
Mountain-Pacific 5/	307,038	77,475	13,438	40,519	-	64,577	503,047	4,969,832
Total	2,911,644	656,750	55,889	489,210	776,278	1,398,877	6,288,648	48,829,920
Percentage of total								
Official 1/	35.14	24.64	34.61	18.81	2.70	18.32	25.02	52.91
Southern 2/	22.84	17.59	15.16	32.50	65.01	25.86	28.85	15.00
Western Trunk Line 3/ ..	20.28	33.12	16.34	27.67	-	24.44	20.59	12.66
Southwestern 4/	11.20	12.85	9.85	12.74	32.29	26.76	17.54	9.25
Mountain-Pacific 5/	10.54	11.80	24.04	8.28	-	4.62	8.00	10.18
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

* Figures for standing renters (renters paying a fixed quantity of products) were included with "Other tenants".
** Figures for croppers are for the Southern divisions (or Southern States) only.
1/ Including Michigan and Virginia.
2/ Excluding Virginia and Louisiana.
3/ Including Wisconsin and excluding Colorado.
4/ Including Louisiana.
5/ Including Colorado.

Source: U.S. Dept. of Commerce, Bureau of the Census, Fifteenth Census of the United States: 1930, Agriculture, Vol. IV, pp. 162-169; except for last column (Gainfully occupied) from U.S. Dept. of Commerce, Bureau of the Census, Abstract of the Fifteenth Census of the United States, 1930, pp. 321-322.

Table 96.—Distribution of Farm Operators, by Tenure of Operator and by Freight Rate Territories, 1930

Grouping B

Territory	Full owners	Part owners	Managers	Tenants			Total farm operators	Gainfully occupied 10 yrs. old and over
				Cash*	Croppers**	Other*		
Official 1/	918,158	145,661	17,809	84,739	3,705	232,846	1,402,918	24,952,861
Southern 2/	816,804	137,918	10,741	179,156	571,362	430,491	2,146,472	9,022,343
Western Trunk Line 3/ ..	617,477	229,051	9,968	139,5[illegible]	-	358,419	1,354,478	6,585,165
Southwestern 4/	279,096	78,142	4,771	49,43[illegible]	201,211	329,036	941,689	3,702,516
Mountain-Pacific 5/	280,109	65,978	12,600	36,219	-	48,085	443,091	4,566,965
Total	2,911,644	656,750	55,889	489,210	776,278	1,398,877	6,283,648	48,829,920
				Percentage of total				
Official 1/	31.53	22.18	31.86	17.32	0.48	16.65	22.31	51.10
Southern 2/	28.05	21.00	19.22	36.62	73.60	30.77	34.13	18.48
Western Trunk Line 3/ ..	21.21	34.88	17.84	28.53	-	25.62	21.54	13.49
Southwestern 4/	9.59	11.90	8.54	10.11	25.92	23.52	14.97	7.58
Mountain-Pacific 5/	9.62	10.04	22.54	7.42	-	3.44	7.05	9.35
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

* Figures for standing renters (renters paying a fixed quantity of products) were included with "Other tenants".
** Figures for croppers are for the Southern divisions (or Southern States) only.
1/ Including Michigan.
2/ Including Virginia and Louisiana.
3/ Including Wisconsin and Colorado.
4/ Excluding Louisiana.
5/ Excluding Colorado.

Source: U.S. Dept. of Commerce, Bureau of the Census, Fifteenth Census of the United States: 1930, Agriculture, Vol. IV, pp. 162-169; except for last column (Gainfully occupied) from U.S. Dept. of Commerce, Bureau of the Census, Abstract of the Fifteenth Census of the United States, 1930, pp. 321-322.

[fol. 5780] in the number and proportion of partial farm owners only by Western Trunk Line territory. In contrast, Southern territory is equally outstanding in showing a larger number and proportion of cash tenants and croppers than any other rate territory and is exceeded by Southwestern territory in the proportion of "other" tenant farmers by only 1 point percent in the B grouping. About one-quarter of the cash and of "other" tenants are found in Western Trunk Line territory and nearly one-quarter of the "other" tenants in the Southwestern area. Southwestern territory accounts for nearly all the croppers not found in Southern territory. The Bureau of the Census does not publish figures for croppers outside of the Southern States.

In Table 97 the full and part owners of farms have been combined in a single group and all three classes of tenants in another group. From this table it appears that a larger number and proportion (between 29 and 33 percent depending on the grouping used) of full and partial farm owners in the United States were located in Official territory than in any other rate area. Between 21 and 27 percent of these owners, depending on the grouping used, are found in Southern, and between 22 and 24 per cent in Western Trunk Line territory. The remainder, representing roughly from 19 to 22 percent, depending on the grouping used, are rather evenly divided between the Southwestern and the Mountain-Pacific territories. In three of the five territories, Official, Western Trunk Line, and Mountain-Pacific, the number and proportion of farm owners appreciably exceeds the number of tenants while the reverse is characteristic of Southern and Southwestern territories. Between 38 and 44 percent (depending on the grouping used) of the more than 2.5 million tenants were found in the Southern area as against a trifle over 12 percent located in Official territory. This proportion of tenant farmers in Official territory, it will be noted, is much below that of any other rate area except the Mountain-Pacific division which shows the lowest proportion of tenants. In this latter area tenant farmers represent between 20 and 21 percent of the total farm owners and tenants. In Official territory, on the other hand, with something like three times as many farm owners and tenants as the Mountain-Pacific division, the proportion of tenants to the total farmers in the former area is only slightly higher than in the latter.

Table 97. Distribution of Farm Operators, 1930

Territory	Owners		Tenants	
	Number	Percent of total	Number	Percent of total
Grouping A				
Official 1/	1,184,923	33.20	369,260	13.86
Southern 2/	780,459	21.87	1,025,488	38.49
Western Trunk Line 3/ ..	808,102	22.66	477,290	17.91
Southwestern 4/	410,397	11.50	687,231	25.79
Mountain-Pacific 5/	384,513	10.77	105,096	3.95
Total	3,568,394	100.00	2,664,365	100.00
Grouping B				
Official 6/	1,063,819	29.81	321,290	12.06
Southern 7/	954,722	26.76	1,181,009	44.32
Western Trunk Line 8/ ..	846,528	23.72	497,982	18.69
Southwestern 9/	357,238	10.01	579,680	21.76
Mountain-Pacific 10/ ...	345,087	9.70	84,404	3.17
Total	3,568,394	100.00	2,664,365	100.00

1/ Including Michigan and Virginia.
2/ Excluding Virginia and Louisiana.
3/ Including Wisconsin and excluding Colorado.
4/ Including Louisiana.
5/ Including Colorado.

6/ Including Michigan.
7/ Including Virginia and Louisiana.
8/ Including Wisconsin and Colorado.
9/ Excluding Louisiana.
10/ Excluding Colorado.

Source: U. S. Department of Commerce, Bureau of the Census, Fifteenth Census of the United States: 1930; Agriculture, Vol. IV, pp. 162-169.

[fol.5782] *Skilled Workers and Foremen*

Table 98 distributes by rate territories the skilled workers in each of the different skills, as classified by the Census study referred to, in which over 100,000 people were gainfully employed in 1929, excluding only foremen, policemen and locomotive engineers. Although Official classification territory included in 1929 only 51 to 53 percent of the population gainfully employed, depending upon whether the A or B grouping is used, the proportion of skilled workers in this territory was consistently higher than its proportion of the total gainfully employed for each of the 12 skills tabulated. This is the only one of the five freight rate territories of which this statement can be made. Southern territory with almost equal consistency showed a substantially lower proportion of each of these skills than its percentage of the total gainfully employed. In about nine of the occupations this area included over 60 percent of the United States total and for half of the twelve, the proportions are from two-thirds to three-quarters or more of the United States total. In the Mountain-Pacific division the proportion of people gainfully employed in these twelve skills is less than the proportion of the area's gainfully employed in a majority of cases. In the other two rate territories the proportion of the United States total employed in some skills exceeded the territories' proportion of the total gainfully employed but the number of skills for which this is true is less than in the Mountain-Pacific division, thus placing them in an intermediate position between that territory and the Southern rate area.

Semi-Skilled and Unskilled Workers

The total number of semi-skilled workers so classified by the Census analysis is just under 8 million (7,977,572) of which number about 4 million or just over 50 percent are classed as manufacturing operatives. A little under another million persons (972,418) are employed as chauffe-rs and truck and tractor drivers, more than a third of a million (374,290) as barbers, hairdressers and manicurists, and little over one-quarter of a million as housekeepers and stewards. These groups together, therefore, account for more than 70 percent of the total semi-skilled labor, the remaining 30 percent being distributed in some 35 occupa-

Territory	Blacksmiths, forgemen and hammermen	Brick and stone masons and tile layers	Carpenters	Compositors, linotypers and typesetters	Electricians	Engin (stati y) cran n, hois men, etc.	Machinists, millwrights and toolmakers	Mechanics	Molders, founders and casters (metal)	Painters, p riers, varnishers, enamelers, etc.	Plumbers and gas and steam fitters	Tailors and tailoresses	Total skilled workers and foremen	Gainfully occupied 10 yrs. old and over
Grouping A														
Official 1/	79,811	121,363	530,246	127,481	185,497	191,438	571,860	353,280	80,252	349,807	163,958	134,402	4,029,401	25,833,072
Southern 2/	15,163	14,880	102,855	10,521	19,361	19,302	41,628	63,016	7.451	40,318	15,715	4,922	531,163	7,326,486
Western Trunk Line 3/	21,173	16,923	107,306	20,266	25,974	29,752	68,076	80,129	11,094	59,868	21,345	10,443	671,594	6,182,298
Southwestern 4/	15,407	7,950	72,160	8,312	13,117	33,614	23,215	52,964	1,180	27,619	13,717	6,143	383,078	4,518,232
Mountain-Pacific 5/ .	15,915	9,787	116,859	17,052	35,868	43,258	56,316	88,864	5,181	51,319	23,079	13,373	667,451	4,969,832
Total	147,469	170,903	929,426	183,632	280,317	316,964	761,095	638,253	105,158	528,931	237,814	169,283	6,282,687	48,829,920
Percent of total														
Official 1/	54.12	71.01	57.05	69.42	66.17	60.40	75.14	55.35	76.32	66.14	68.94	79.39	64.14	52.91
Southern 2/	10.28	8.71	11.07	5.73	7.08	6.09	5.47	9.87	7.08	7.62	6.61	2.91	8.45	15.00
Western Trunk Line 3/	14.36	9.90	11.55	11.04	9.27	9.26	8.94	12.56	10.55	11.32	8.98	6.17	10.69	12.66
Southwestern 4/	10.45	4.65	7.76	4.53	4.68	10.60	3.05	8.30	1.12	5.22	5.77	3.63	6.10	9.25
Mountain-Pacific 5/ .	10.79	5.73	12.57	9.28	12.80	13.65	7.40	13.92	4.93	9.70	9.70	7.90	10.62	10.18
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Grouping B														
Official 6/	77,343	119,145	512,238	125,706	181,515	188,260	562,986	343,901	79,340	342,728	160,246	133,614	3,938,297	24,952,861
Southern 7/	19,642	18,460	133,184	13,556	26,217	27,663	54,468	80,124	8,529	52,309	21,839	6,404	688,434	9,022,313
Western Trunk Line 8/	22,613	17,821	114,135	21,588	27,913	31,733	71,852	86,174	11,420	63,107	22,857	11,368	716,450	6,535,165
Southwestern 9/	13,396	6,588	59,839	7,052	10,743	28,431	19,249	45,235	1,014	22,707	11,305	5,449	316,911	3,702,616
Mountain-Pacific 10/.	14,475	8,889	109,980	15,730	33,929	40,872	52,540	82,819	4,855	48,080	21,567	12,448	622,595	4,566,965
Total	147,469	170,903	929,426	183,632	280,317	316,964	761,095	638,253	105,158	528,931	237,814	169,283	6,282,687	48,829,920
Percent of total														
Official 6/	52.45	69.72	55.11	68.45	64.75	59.39	73.97	53.88	75.45	64.80	67.33	78.93	62.69	51.10
Southern 7/	13.32	10.80	14.33	7.38	9.35	8.73	7.16	12.55	8.11	9.89	9.18	3.78	10.96	18.48
Western Trunk Line 8/	15.33	10.43	12.29	11.76	9.96	10.01	9.44	13.50	10.36	11.93	9.61	6.72	11.40	13.49
Southwestern 9/	9.08	3.85	6.44	3.84	3.83	8.97	2.53	7.09	.96	4.29	4.76	3.22	5.04	7.58
Mountain-Pacific 10/.	9.82	5.20	11.83	8.57	12.11	12.90	6.90	12.98	4.62	9.09	9.07	7.35	9.91	9.35
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

1/ Including Michigan and Virginia.
2/ Excluding Virginia and Louisiana.
3/ Including Wisconsin and excluding Colorado.
4/ Including Louisiana.
5/ Including Colorado.
6/ Including Michigan.
7/ Including Virginia and Louisiana.
8/ Including Wisconsin and Colorado.
9/ Excluding Louisiana.
10/ Excluding Colorado.

Source: U. S. Department of Commerce, Bureau of the Census, Fifteenth Census of the United States:
1930, Population, Vol. IV, Occupations, by States, U.S. summary, Table 3; individual states, Table 4, except for last column (Gainfully occupied) from U.S. Dept. of Commerce, Bureau of the Census, Abstract of the Fifteenth Census of the United States, 1930, pp. 321-322; and next to last column (Total skilled workers) from U. S. Dept. of Commerce, Bureau of the Census, A. Social-Economic Grouping of the Gainful Workers of the United States, 1930, pp. 46-49.

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[fol. 5784] tions no one of which accounts for as many as 200,000 persons, and the great majority of which represent a livelihood for less than 100,000 persons. Because the character of these occupations as well as the comparatively small number employed in these subclasses the semi-skilled workers have not been distributed by freight rate territories excepting only manufacturing operatives.

The total number of unskilled workers as distributed by the Census analysis is 14,008,869. Of these workers farm laborers, laborers in manufacturing, "not otherwise specified" mine operatives (coal and other) and the servant classes (cooks and other servants) account for the occupations of a little over 10.5 million or roughly 75 percent of the total. The distribution of these classes of workers, together with that of the semi-skilled manufacturing operatives, is shown in Table 99 according to freight rate territories.

Considering the high centralization of manufacturing operations in Official territory, it is not surprising to find that from 72 to 74 percent of the manufacturing operatives in the United States live in Official classification territory, or roughly 20 points percent more than the proportion of the total gainfully employed within this area. The South ranks second in importance in manufacturing operatives with the Western Trunk Line, Mountain-Pacific, and Southwestern territories following in the order named.

As bearing upon the importance of agriculture within these territories, it is of interest to note that in its number and proportion of the total farm laborers Official territory is second only to Southern territory. In terms of wage workers, however, there were more farm laborers in Official territory than in any other freight rate territory upon the basis of the A grouping of states though Southern territory leads on the basis of the B grouping. The South, however, shows more than half of all the unpaid family workers whereas Official territory is lower than any other area except Mountain-Pacific in this respect though not greatly below Western Trunk Line.

In unskilled labor in manufacturing, Official classification territory shows a very much lower proportion of the United States total than it does of semi-skilled labor represented by manufacturing operatives, less than 60 percent

(Here follows 1 Photolithograph, side folio 5781)

Table 99.—Distribution of Manufacturing Operatives and of Specified Principal Classes of Unskilled Labor, by Freight Rate Territories, 1930

Territory	Manufacturing operatives (semi-skilled workers ϕ)	Unskilled: Farm laborers: Wage workers	Unskilled: Farm laborers: Unpaid family labor	Unskilled: Farm laborers: Total	Unskilled: Manufacturing laborers	Unskilled: Mine operatives	Unskilled: Servant class (cooks and other servants)	Total unskilled labor distributed by this table	Total unskilled labor*	Gainfully occupied 10 yrs. old and over
Grouping A										
Official 1/	2,887,377	810,203	190,062	1,000,265	1,907,254	560,800	1,081,906	4,550,225	6,356,580	25,833,072
Southern 2/	425,919	626,300	872,071	1,498,371	447,282	111,773	345,082	2,402,508	2,950,512	7,326,486
Western Trunk Line 3/.	297,526	492,994	208,774	701,768	337,373	51,250	207,063	1,297,454	1,684,891	6,182,498
Southwestern 4/	101,013	395,821	340,304	736,125	249,284	77,266	182,069	1,244,744	1,602,455	4,518,232
Mountain-Pacific 5/ ..	198,220	407,654	43,581	456,235	272,087	118,052	183,013	1,029,387	1,414,431	4,969,832
Total	3,910,055	2,732,972	1,659,792	4,392,764	3,213,280	919,141	1,999,133	10,524,318	14,008,869	48,829,920
Percent of total										
Official 1/	73.85	29.64	11.45	22.77	59.35	61.01	54.12	43.23	45.38	52.91
Southern 2/	10.89	22.92	52.54	34.11	13.92	12.16	17.26	22.83	21.06	15.00
Western Trunk Line 3/.	7.61	18.04	12.58	15.97	10.50	5.58	10.36	12.33	12.03	12.65
Southwestern 4/	2.58	14.48	20.50	16.76	7.76	8.41	9.11	11.83	11.43	9.25
Mountain-Pacific 5/ ..	5.07	14.92	2.93	10.39	8.47	12.84	9.15	9.78	10.10	10.18
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Grouping B										
Official 6/	2,831,842	728,146	153,773	881,919	1,845,706	545,545	1,035,003	4,308,173	6,034,465	24,952,861
Southern 7/	505,259	780,569	972,358	1,752,927	567,900	133,338	439,781	2,893,946	3,512,258	9,022,313
Western Trunk Line 8/.	308,959	531,280	217,252	748,532	355,716	67,356	221,042	1,392,648	1,807,645	6,585,165
Southwestern 9/	77,208	323,609	276,306	599,915	190,214	70,956	134,273	995,358	1,262,824	3,702,616
Mountain-Pacific 10/ .	186,787	369,368	40,103	409,471	253,744	101,944	169,034	934,193	1,291,677	4,566,965
Total	3,910,055	2,732,972	1,659,792	4,392,764	3213,280	919,141	1,999,133	10,524,318	14,008,869	48,829,920
Percent of total										
Official 6/	72.43	26.64	9.26	20.08	57.44	59.35	51.77	40.93	43.08	51.10
Southern 7/	12.92	28.56	58.58	39.90	17.67	14.51	22.00	27.50	25.79	18.48
Western Trunk Line 8/.	7.90	19.44	13.09	17.04	11.07	7.33	11.06	13.23	12.90	13.49
Southwestern 9/	1.97	11.84	16.65	13.66	5.92	7.72	6.72	9.46	9.01	7.58
Mountain-Pacific 10/ .	4.78	13.52	2.42	9.32	7.90	11.09	8.45	8.88	9.22	9.35
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

ϕ Manufacturing operatives not otherwise specified, in Edwards' study.
1/ Including Michigan and Virginia.
2/ Excluding Virginia and Louisiana.
3/ Including Wisconsin and excluding Colorado.
4/ Including Louisiana.
5/ Including Colorado.
6/ Including Michigan.
7/ Including Virginia and Louisiana.
8/ Including Wisconsin and Colorado.
9/ Excluding Louisiana.
10/ Excluding Colorado.

*Includes farm laborers, factory and building construction laborers, other laborers, and servant classes.

Source: U.S. Department of Commerce, Bureau of the Census, Fifteenth Census of the U.S.: 1930, Population, Vol. IV, Occupations, by States: U.S. summary, Table 3; individual states, Table 4. Last column (Gainfully occupied) U.S. Dept. of Commerce, Bureau of the Census, Abstract of the Fifteenth Census of the U.S., 1930, pp. 321-2. Column Total Unskilled Labor - U.S. Dept. of Commerce, Bureau of the Census, A Social-Economic Grouping of the Gainful Workers of the United States, 1930, pp. 46-49.

5785

[fol. 5786] of the former being located in this area as compared with above 72 percent for the latter. Both the number and percentage of unskilled factory laborers in each of the other four areas appreciably exceeds the number and percentage of semi-skilled manufacturing operatives.

This situation should be considered in the light of the figures presented above showing that the proportions of skilled workers in 12 leading occupations exceeded the proportions of the total gainfully employed in Official classification territory and the complete or partial reverse of this situation in the other four territories. (Table 98.)

The mine operative figure is heavily weighted by coal miners who in the 1930 census were more than twice as numerous as other mine operatives. This no doubt accounts in part for the fact that the largest numbers and proportions of miners are found in Official classification territory. Southern or Mountain-Pacific territory is second depending upon which grouping is used. In Official territory the proportions of miners are substantially higher than are the proportions of the total gainfully employed. The same is also true for the Mountain-Pacific division. The reverse of this is true of the other three divisions with a qualification for Southwestern territory in the B grouping of States.

The servant class, as is perhaps to be expected, is distributed between the freight rate territories in proportions rather closely approximating the distribution of the total gainfully employed. In both Official and Southern territories the proportion of the servant class is slightly higher than the proportion of the gainfully employed whereas it is slightly lower in the other three freight rate territories. The differences in the distribution of servants and total gainfully employed appears to be too narrow to be of any great significance.

EXHIBIT 2

INTERSTATE COMMERCE COMMISSION
BUREAU OF STATISTICS

—o—

RAILROAD FREIGHT SERVICE COSTS IN THE VARIOUS RATE TERRITORIES 1939

—o—

PREPARED UNDER THE DIRECTION OF
FORD K. EDWARDS,
PRINCIPAL ECONOMIST IN CHARGE OF COST SECTION

—o—

WASHINGTON, D.C., MAY, 1941

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COST SCALES

Cost scales by territories and classes of equipment (bound separately).

The analysis and research necessary to this study were made by the members of the Cost Section and E. S. Hobbs, Statistical Analyst. The application of the cost formula to the carriers' accounting and statistical data was made under the direction of John W. Kreps, Chief, Annual Reports Section.

CHAPTER I

Levels of Costs and Their Economic Significance

Purpose of the study:

The purpose of this study 1/ is to provide territorial cost data that may be used in determining the relative transportation costs in the respective rate territories, and that may be of aid in the development of territorial class rate scales.

Brief description of the cost scales:

The scales of costs shown for each territory are based upon the average operating conditions in each territory. The costs, therefore, represent a weighted average of all conditions, i.e., main line and branch line operation, through train and way train operation, operation on lines of heavy traffic density and lines of light traffic density, and the operation of large terminals and small terminals.

Distribution of costs on a use basis:

The distribution of the expenses herein has been based on the relative use that the carload and less-carload traffic of varying net loads makes of the transportation facilities of the carrier.

The cost study does not reflect those factors which occasion differences in rates which cannot be justified under a strict adherence to a cost of service principle. Such factors include the value of the service, ability to pay, value of the commodity, competitive relationships, degree of manufacture, etc. Because of these factors some rates may be above the costs indicated and other rates may be below such costs, but on the average all traffic must earn the amounts shown if the carriers' revenues as a whole are to cover the elements of cost listed.

The expansion of the carload expenses for less-carload and passenger deficits 2/ results in the distribution of such deficits

---

1/ This study consists of two parts, bound separately. The first contains the explanatory text. The second contains the cost scales.

2/ By "deficit" is meant the amount by which the revenues from the less-carload and passenger services fail to cover the costs assigned and apportioned to these services.

over each carload movement in proportion to the use each movement makes of the carrier's transportation facilities. As in the distribution of the expenses, no recognition is here given to the differences between commodities in their ability to pay.

All data are based on the experience of the year 1939. Conclusions concerning less-carload and passenger deficits are also based on the experience for this year.

Levels of cost:

The concept of cost embraces many considerations depending upon the use for which the data are intended. No one single figure can satisfy all situations. For this reason the present study develops the following significant levels of cost:

I. Carload and less-carload out-of-pocket costs. 1/

II. Carload and less-carload freight operating expenses, rents and taxes.

III(a). Carload and less-carload operating expenses, rents and taxes, plus an allowance for a return at 4 percent, upon the carload and less-carload portions of the value of the property.

III(b). Carload and less-carload operating expenses, rents and taxes, plus an allowance for a return at 5¾ percent upon the carload and less-carload portions of the value of the property.

IV. Carload operating expenses, rents and taxes, plus less-carload and passenger operating deficits, but excluding return.

V(a). Carload operating expenses, rents and taxes, plus less-carload and passenger operating deficits and a return at 4 percent upon the total value of the property, including the less-carload and passenger portions.

V(b). Carload operating expenses, rents and taxes, plus less-carload and passenger operating deficits, and a return at 5¾ percent upon the total value of the property, including the less-carload and passenger portions.

Levels of cost and their economic significance:

The respective levels of cost developed in this study indicate the average revenue which each 100 pounds of freight would

1/ See Chapter V for the treatment of out-of-pocket costs.

have had to earn during the period studied (considering the length of haul, net weight of load, percent of empty return of the equipment, and the tare weight of the equipment) to cover the elements of cost indicated. The nature of the commodity carried receives consideration in these scales only through the variation in load per car, and type of car used. Loss and damage receives separate consideration apart from the scales.

As already indicated, the distribution of the expense is based upon the relative use each movement makes of the carrier's transportation facilities. However, while costs distributed on a "use" basis serve to indicate what each service, carload, less-carload and passenger ought to pay from the cost of service standpoint, the fact cannot be overlooked that these services do not contribute on this basis to the joint costs; i.e., those expenses common to all the services. If some service pays less, others must pay more. In computing carload freight costs, it is economically correct to exclude from such costs these common expenses (such as maintenance of way, general overheads and taxes) which are chargeable to the less-carload and passenger services on a "use" basis. The accounting procedure and the formula used herein accomplish this result. At the same time, it is economically incorrect in computing the revenue needs for carload traffic to ignore the fact that the less-carload and passenger services during the period of study failed to earn enough to cover the full amount of those common expenses apportioned to such services. The study provides for such consideration through its treatment of the less-carload and passenger deficits, but in so doing it gives recognition to the "value of service" or "ability to pay" of these services and the result constitutes a departure from the "use" basis of cost finding. (See Cost Levels IV and V) However, rate making, like all forms of price fixing, is in part an economic problem and not merely an engineering or accounting problem, and by the method of presentation here employed, it is possible for the reader to choose the combination of cost items considered most appropriate for his problem.

Criticism may be leveled at the continued use of the word "cost" under the wider interpretation here given to this term. The term "level of revenue needs" would probably be more proper when referring to levels IV and V. For simplicity of reference, however, the term "cost level" is applied uniformly to all figures.

The economic significance of each of the levels of cost (or levels of revenue needs) is set forth below.

Level I. Carload and less-carload out-of-pocket costs:

This level of cost indicates that average revenue which each 100 pounds of freight would have had to earn to cover the out-of-pocket costs.

The out-of-pocket costs are those added expenses which are occasioned by the existence of any given traffic, or those expenses which would be eliminated by the loss of such traffic. This level of cost represents the minimum below which rates cannot fall without the carrier suffering a loss. At this level of cost it is a matter of indifference 1/ whether or not the carrier handles the traffic, since the revenues received merely equal the added costs incurred. See Chapter V for an explanation of the procedure used in obtaining out-of-pocket costs, and the assumptions upon which such costs are based.

Level II. Carload and less-carload freight operating expenses, rents and taxes:

This level of cost indicates that average revenue which each 100 pounds of freight would have had to earn to cover the operating expenses, rents and taxes assigned and apportioned to the traffic on the basis of the relative "use" which it made of the carrier's transportation facilities. If the revenues from the less-carload and passenger services fail to equal the expenses assigned and apportioned to these services (as was true in 1939 for all territories), this level of cost is of limited significance for purposes of making rates on carload traffic. Under such circumstances Cost Level II represents something above out-of-pocket costs but something below that level of the carload rates necessary to provide for the carrier's subsistence, i.e., permit it to meet its total current operating expenses, rents and taxes exclusive of any allowance for a return or profit. Furthermore, under such conditions, the carload freight service would not be economically self-supporting regardless of whether the less-carload and passenger services continued in existence or were abandoned. 2/

Level III(a) and III(b). Carload and less-carload operating expenses, rents and taxes, plus an allowance for a return at 4 and 5¾ percent respectively, upon the carload and less-carload portions of the value of the property:

This level indicates that average revenue which each 100 pounds of carload or less-carload freight would have had to earn to cover the operating expenses, rents, and taxes, assigned and apportioned

---

1/ Apart from the matter of thereby attracting other more profitable tonnage from the same shipper.

2/ If the revenues from the less-carload or the passenger services fail to equal the out-of-pocket expenses occasioned by the existence of these services, the so-called "subsistence level" of the carload rates could presumably be reduced by abandoning these services and thus saving the amount of the difference between the less-carload and passenger revenues and the less-carload and passenger out-of-pocket costs. The degree to which the revenues from the less-carload and passenger services are covering the out-of-pocket expenses for these services is treated in Chapter III, pages 40-44.

to the traffic on a "use" basis and in addition provide for a return.

This level as applied to carload traffic has economic significance only providing that the less-carload traffic and the passenger traffic are contributing a return on their portion of the value. Inasmuch as this condition does not now obtain, this level of cost has limited economic significance for rate-making purposes.

Level IV. Carload freight operating expenses, rents and taxes, plus less-carload and passenger operating deficits, but excluding return:

This level of cost indicates that average revenue which each 100 pounds of carload freight would have had to earn during the period of study to cover the carload freight service costs, and in addition those expenses assigned and apportioned to the less-carload and passenger services which the revenues from these services were unable to cover. This level of cost, or better stated, level of revenue needs, approximates a bare "subsistence" level of earnings in that under it the carrier's income from all services would equal its total current expenditures for operating expenses, operating rents, and taxes, exclusive of any return on the value of the property used in transportation.

The inclusion of the less-carload and passenger deficits does not throw a burden on the freight service which it is not economically proper for it to bear, providing first, that the revenues from these two services represent in full the ability of these two classes of traffic to pay and secondly providing that such revenues are not less than the out-of-pocket expenses occasioned by the existence of these services.

Level V(a) and V(b). Carload operating expenses, rents and taxes, plus less-carload and passenger operating deficits, and a return at 4 and 5¾ percent, respectively, upon the value of the total property, including the less-carload and passenger portions:

This level indicates that average revenue which each 100 pounds of carload freight would have had to earn if the carrier's revenues from its carload, less-carload and passenger services were to cover the total operating expenses, rents and taxes for these services and in addition earn a return (at 4 or 5¾ percent) upon the total value of the property used by these services.

CHAPTER II

Territories for which Costs Were Developed

Selection and grouping of territories:

The list of territories for which cost data have been developed is based on that given in the Commission's order of January 9, 1940 1/ in Dockets No. 28300, Class Rate Investigation, and No. 28310, Consolidated Freight Classification.

Description of territories appearing in Commission's order in Docket 28300, Docket 28310, and MC-C-150 2/, dated January 9, 1940:

The principal territories, as defined in Appendix A to the Commission's order of January 9, 1940, are as follows:

Official territory, including Illinois territory. -- All that part of the United States lying generally east of the following line: Lake Michigan, including west-bank car-ferry ports on official-territory traffic, south to Milwaukee, Wis., thence the line of the Chicago, Milwaukee, St. Paul & Pacific Railway (the Milwaukee) to Rugby Junction, Wis., thence the line of the Minneapolis, St. Paul & Sault Ste. Marie Railway to Duplainville, Wis., thence the line of the Milwaukee, through Watertown to Madison, Wis., thence the line of the Chicago & North Western Railway to Dodgeville, Wis., thence the line of the Illinois Central Railroad to the Illinois State Line and west along the latter to the Mississippi River, thence south along that river, including west-bank crossing points on official-territory traffic, to the Ohio River; and lying generally north of the following line: along the Ohio River east from its mouth, including south-bank crossing points on official-territory traffic, to Cincinnati, Ohio, thence east of the line of the Chesapeake & Ohio Railway to Kenova, W. Va., thence on the main line of the Norfolk & Western Railway to its crossing with the line of the Virginian Railway west of Roanoke, Va., thence on the Virginian Railway to Suffolk, Va., thence on the main line of the Norfolk & Western Railway to Norfolk, Va.

Southern territory. -- All that part of the United States lying south of official territory and east of the Mississippi River, including north-bank Ohio River and west-bank Mississippi River crossing points on southern territory traffic.

1/ This order was subsequently rescinded under date of November 25, 1940.
2/ Docket 28300, Class Rate Investigation, 1939.
Docket 28310, Consolidated Freight Classification,
Docket MC-C-150, Motor Freight Classification.

Southwestern territory. -- Consists of the States of Arkansas, Oklahoma, Texas, and Louisiana west of the Mississippi River, including east-bank crossing points on the Mississippi River in Tennessee, Mississippi, and Louisiana on southwestern-territory traffic.

Western trunk-line territory, including zone C in Wisconsin and southern Missouri. -- All that part of the United States lying west of official-Illinois and southern territories, including east-bank Mississippi River crossings in Illinois on western trunk-line territory traffic, north of southwestern territory and New Mexico, and on and east of the following line: The western boundaries of the States of North Dakota, South Dakota, and Nebraska south to the main line of the Union Pacific Railroad, thence along that railroad to Cheyenne, Wyo., thence south on the line of the Colorado & Southern Railway and paralleling railroads passing through Denver, Colorado Springs, and Trinidad, Colo., to the southern border of Colorado.

Mountain Pacific territory. -- All that part of the United States lying west of western trunk-line and southwestern territories.

Territories used for the purpose of the cost study:

For the purpose of determining territorial costs, the five territories described above were increased to twelve for the purpose of anticipating, if possible, the additional information the Commission may need in these proceedings. For example, it was felt that within the Official territory there are at least three areas having different operating characteristics, namely, the New England states, the Pocahontas territory, and the remaining area in Official territory. Furthermore, it was also felt desirable to compute costs separately for the operations of the Western Trunk Line Railroads in northern Illinois. This permitted the operations of these railroads in and around Chicago to be included in the Eastern territory, the Western Trunk Line territory or both as the Commission may see fit. Under the description of the territories appearing in the Commission's order of January 9, 1940, referred to above, such operations belong in the Official territory. On the other hand, if cost scales are desired applicable to traffic moving from the industrial areas of northern Illinois westbound into Western Trunk Line territory, a closer approximation of the costs is obtained by grouping the operations of the Western Trunk Line railroads in northern Illinois with the operations of the same railroads in Western Trunk Line territory than would be obtained by using the Official territory cost scales for the movement across northern Illinois and the Western Trunk Line cost scale beyond.

This same situation exists as to southern Missouri which, while lying in Western Trunk Line Territory, nevertheless contains important terminal operations of the Southwestern carriers. It was originally planned to set apart the costs for all the rail operations of the Southwestern carriers in southern Missouri for inclusion with either the Western Trunk Line Territory or the Southwestern Territory as might be found desirable. Practical difficulties in obtaining the data within the limited time available precluded the adoption of this plan, however, and the separation was ultimately limited to the operations of two Southwestern railroads in southern Missouri, namely the Kansas City Southern and the Missouri-Kansas-Texas Railroad. While the Missouri operations of these two railroads technically belong in Western Trunk Line Territory, the lines serve as feeders for Southwestern Territory, and hence the cost scales show them grouped solely with the Southwestern carriers, although the data assembled permits of their inclusion in either territory.

The description of the territories and a list of the railroads or divisions of railroads assigned to each are provided below. 1/

Territories for which cost data computed:

Territorial designation No.	Territory	Description of territory
1	New England	New England States
2	Eastern, excluding New England and the operation of the Western Trunk Line Railroads in northern Illinois.	Includes the Official Territory (and Illinois Territory) as defined by the Commission in Appendix A of its order dated Jan. 9, 1940, minus however, the following: (a) New England States (b) Pocahontas railroads (c) Operations of the Western Trunk Line railroads in northern Illinois.
3	Eastern, excluding New England but including the operation of the Western Trunk Line railroads in northern Illinois.	Same as for Territory 2 except that it includes the operations of the Western Trunk Line Railroads in northern Illinois.

1/ See map of territories in cost scales (frontispiece).

Territories for which cost data computed: - Continued

Territorial designation No.	Territory	Description of territory
4	Total Eastern, including New England and the operations of the Western Trunk Line railroads in northern Illinois.	Same as Territory 3 plus New England Territory.
5	Pocahontas	Total operations of the Chesapeake & Ohio, Norfolk and Western, and the Virginian Railroads including those portions of these railroads extending into the Eastern and Southern Territories.
6	Southern	All that part of the United States lying south of Official Territory and east of the Mississippi River but including the total system operations of the Southern Railway and the Richmond, Fredericksburg & Potomac Railroad.
7	Southwestern including southern Missouri.	States of Arkansas, Oklahoma, Texas and Louisiana west of the Mississippi River, and the operations in southern Missouri of the Kansas City Southern Ry. and the Missouri-Kansas-Texas Railroad. 1/

1/ The operations of the St. Louis-San Francisco Railway and the St. Louis Southwestern Railway in southern Missouri are included in Southwestern Territory. Part of the operations of the Missouri Pacific Railroad in southern Missouri are included in Western Trunk Line Territory and part in Southwestern Territory. That part included in Southwestern Territory consists principally of the Illinois Division paralleling the Mississippi River.

Territories for which cost data computed: - Continued

Territorial designation No.	Territory	Description of territory
8	Western Trunk Line, excluding the operations of the Western Trunk Line railroads in northern Illinois and the operations of Southwestern railroads in southern Missouri.	All of that part of the United States lying west of Official-Illinois and Southern Territories, north of Southwestern Territory and New Mexico and east of the following line: Western boundaries of the States of North Dakota, South Dakota, and Nebraska, south to the main line of the Union Pacific Railroad, thence along that railroad to Cheyenne, Wyo.; thence south on the line of the Colorado and Southern Railway and paralleling railroads passing through Denver, Colorado Springs, and Trinidad, Colorado, to the southern border of Colorado.
9	Western Trunk Line, including the operations of the Western Trunk Line railroads in northern Illinois but excluding the operations of Southwestern railroads in southern Missouri.	Same as Territory No. 8 except for the inclusion of the operations of the Western Trunk Line railroads in northern Illinois.
10	Mountain Pacific	All that part of the United States lying west of Western Trunk Line and Southwestern Territories.
11	Total Western, including Southwestern, Western Trunk Line, Mountain Pacific, northern Illinois and southern Missouri.	Includes Southwestern Territory, Western Trunk Line Territory, Mountain Pacific Territory, and the operations of the Western Trunk Line railroads in northern Illinois and the operations of Southwestern railroads in southern Missouri.

Territories for which cost data computed: - Continued

Territorial designation No.	Territory	Description of territory
12	Total United States	Includes all operations within the United States.
	Operations of Western Trunk Line railroads in northern Illinois.	Operations of Western Trunk Line railroads in northern Illinois insofar as they could be separated.
	Operations of Southwestern railroads in southern Missouri.	Operation of the Kansas City Southern Railway and the Missouri-Kansas-Texas Railroad in southern Missouri.

The above description of the territories is somewhat approximate as it was not practicable to cut the lines of certain railroads exactly at the boundaries indicated. For this reason, the above territorial descriptions are useful in generally indicating the geographical extent of each of the territories.

List of the railroads or divisions thereof assigned to each territory:

In the preceding paragraph a description has been given of the territories in terms of their geographical boundaries. There follows herewith a list of the railroads, or divisions of railroads, which were assigned to each territory. As a railroad division constitutes the smallest part of a railroad for which a subdivision could be made from currently compiled statistics, it necessarily follows that there is a small amount of error resulting from some part of a division extending across the geographical boundary indicated. However, the cases in which this situation arises have a negligible bearing on the results. The railroads or divisions thereof assigned to each territory are as follows:

1. New England:

Bangor & Aroostook R. R.
Boston & Albany R. R.
Boston & Maine R. R.
Canadian National Lines in New England
Canadian Pacific Ry. (Lines in Vermont)
Central Vermont Ry.
International Ry. Co. of Maine

1. New England: - Continued

Maine Central R. R.
New York Connecting R. R.
New York, New Haven & Hartford R. R.
Rutland R. R.

2. Eastern, excluding New England and the operations of the Western Trunk Line Railroads in Northern Illinois:

Akron, Canton & Youngstown Ry.
Ann Arbor R. R.
Baltimore & Ohio R. R.
Bessemer & Lake Erie R. R.
Cambria & Indiana R. R.
Central R. R. of New Jersey
Chicago & Eastern Illinois Ry.
Chicago & Illinois Midland Ry.
Chicago, Indianapolis & Louisville Ry.
Chicago, Milwaukee, St. Paul & Pacific R. R., - Terre Haute Division extending roughly from Chicago to Terre Haute, Ind.
Delaware & Hudson R. R.
Delaware, Lackawanna & Western R. R.
Detroit & Mackinac Ry.
Detroit & Toledo Shore Line R. R.
Detroit, Toledo & Ironton R. R.
Elgin, Joliet & Eastern Ry.
Erie R. R. (incl. Chicago & Erie)
Grand Trunk Western R. R.
Illinois Central R. R., - Illinois, Springfield and St. Louis Divisions extending roughly between Clinton, St. Louis and Indianapolis.
Illinois Terminal R. R.
Lehigh & Hudson River Ry.
Lehigh & New England R. R.
Lehigh Valley R. R.
Long Island R. R.
Louisville & Nashville R. R., - operations in the State of Illinois extending roughly between East St. Louis and McKeansboro, Ill.
Missouri-Illinois R. R.
Monongahela Ry.
Montour R. R.
New York Central Railroad, - including the operation of the Michigan Central and Cleveland, Cincinnati, Chicago and St. Louis R. R. but excluding the Boston and Albany R. R.
New York, Chicago & St. Louis R. R.
New York, Ontario & Western Ry.
New York, Susquehanna & Western R. R.
Pennsylvania R. R.
Pennsylvania-Reading Seashore Lines

2. Eastern, excluding New England and the operation of the Western Trunk Line Railroads in Northern Illinois: - Continued

Pere Marquette Ry.
Pittsburgh & Lake Erie R. R.
Pittsburg & Shawmut R. R.
Pittsburgh & West Virginia Ry.
Pittsburg, Shawmut & Northern R. R.
Reading Co.
Staten Island Rapid Transit Ry.
Toledo, Peoria & Western R. R.
Wabash Ry., - Lines East of the Mississippi River
Western Maryland Ry.
Wheeling & Lake Erie Ry.

3. Eastern, excluding New England but including the operation of the Western Trunk Line Railroads in Northern Illinois:

This territory includes all of the railroads designated under Territory No. 2 above and, in addition, those operations designated as "Operation of Western Trunk Line Railroads in Northern Illinois". The railroads included in this latter designation are as follows:

Alton Railroad, - Chicago Terminal, Eastern and Western Divisions (Illinois Lines)
Atchison, Topeka and Santa Fe, - The Chicago Terminal and Illinois Divisions
Chicago and North Western Railway, - operations in the State of Illinois
Chicago, Burlington & Quincy R. R., - operations in the State of Illinois
Chicago Great Western Railroad, - Illinois Division
Chicago, Milwaukee, St. Paul & Pacific Railroad, - Chicago Terminal, Dubuque and Illinois, Milwaukee, and Milwaukee Terminal Divisions
Chicago, Rock Island and Pacific, - Chicago and Rock Island Divisions
Illinois Central Railroad Company, - Chicago Terminal Division

4. Eastern, including New England and the operations of the Western Trunk Line railroads in Northern Illinois:

Lines included are those designated above under Territories Nos. 1 and 3.

5. Pocahontas Territory:

Chesapeake & Ohio Railway 1/
Norfolk & Western Railway
Virginian Railway

6. Southern Territory:

Alabama Great Southern R. R.
Atlanta & West Point R. R. (incl. Western Ry. of Ala.)
Atlanta, Birmingham & Coast R. R.
Atlantic Coast Line R. R.
Central of Georgia Ry.
Charleston & Western Carolina Ry.
Cincinnati, New Orleans & Texas Pacific Ry.
Clinchfield R. R.
Columbus & Greenville Ry.
Florida East Coast Ry.
Georgia R. R. - Lessee Organization
Georgia & Florida R. R.
Georgia Southern & Florida Ry.
Gulf & Ship Island R. R.
Gulf, Mobile & Northern R. R.
Illinois Central R. R., - Kentucky, Mississippi and Louisiana Divisions and Memphis and New Orleans Terminal Divisions

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1/ The cost data of the Chesapeake and Ohio were initially set up on the following three bases:

(a) The operations in Eastern Territory (i.e., the States of Indiana, Ohio, and Illinois) were separated from the remaining operations in Pocahontas Territory on the somewhat arbitrary basis maintained by the carrier for state purposes.

(b) The aggregate of the system expenses and statistics were separated between territories on the basis of the approximate separation developed under (a). This procedure maintained the system average unit costs in each territory. (Treatment similar to that given Union Pacific described elsewhere in this chapter.)

(c) All operations were included in the Pocahontas Territory.

The differences in the Eastern and Pocahontas territorial cost scales resulting from the three procedures outlined above were negligible. However, inasmuch as the consist of the traffic handled in Indiana, Ohio, and Illinois approximated that handled in West Virginia and Kentucky, it was decided to include all the operations of the Chesapeake and Ohio in Pocahontas Territory.

6. Southern Territory: - Continued

Louisville & Nashville R. R., - operations in the States of Indiana, Ohio, Virginia, Kentucky, Tennessee, Missouri, North Carolina, Louisiana, Mississippi, Georgia, Alabama, and Florida.
Mississippi Central R. R.
Mobile & Ohio R. R.
Nashville, Chattanooga & St. Louis Ry.
New Orleans & Northeastern R. R.
Norfolk Southern R. R.
Northern Alabama Ry.
Richmond, Fredericksburg & Potomac R. R.
St. Louis-San Francisco Ry. - States of Alabama, Florida, Mississippi, and Tennessee
Seaboard Air Line Ry.
Southern Ry.
Tennessee Central Ry.
Yazoo & Mississippi Valley R. R.

7. Southwestern including operations of Southwestern railroads in Southern Missouri:

The railroads included in Southwestern Territory are the following:

Atchison, Topeka & Santa Fe, - Oklahoma, Slaton & Plains, Northern, Southern, and Gulf Divisions, and the Panhandle and Santa Fe Ry.
Burlington-Rock Island R. R.
Chicago, Rock Island & Pacific Ry. (incl. Chicago, Rock Island and Gulf Railway), - Oklahoma, Southern, Arkansas and Panhandle Divisions
Fort Worth & Denver City Ry.
Gulf Coast Lines and Subsidiaries
International-Great Northern R. R.
Kansas City Southern Ry., - Southern Division
Kansas, Oklahoma & Gulf Ry.
Louisiana & Arkansas Ry.
Louisiana & Arkansas of Texas
Midland Valley R. R.
Missouri & Arkansas Ry.
Missouri-Kansas-Texas R. R. (including the Missouri-Kansas-Texas of Texas), - operations in the States of Oklahoma and Texas comprising the Southern, North Texas, South Texas, and Northwestern Districts
Missouri Pacific R. R., - comprising the Illinois, Arkansas, Memphis, Little Rock, Central, and Louisiana Divisions
Oklahoma City-Ada-Atoka Ry.

7. Southwestern including operations of Southwestern railroads in Southern Missouri: - Continued

St. Louis-San Francisco Ry. - operations in States of Missouri, Kansas, Oklahoma, Arkansas, and Texas
St. Louis, San Francisco and Texas Ry.
St. Louis Southwestern Ry. (including St. Louis Southwestern of Texas)
Texas & New Orleans R. R.
Texas & Pacific Ry.
Texas Mexican Ry.

The railroads designated as "operation of Southwestern roads in Southern Missouri" are as follows:

Kansas City Southern Ry., - Kansas City Terminal and Northern Divisions
Missouri-Kansas-Texas Railroad, - States of Missouri and Kansas comprising the Northern District

8. Western Trunk Line, excluding the operations of the Western Trunk Line railroads in Northern Illinois and the operations of Southwestern railroads in Southern Missouri:

Alton R. R. - That part of the Western Division comprising the Louisiana and Missouri River Railroad and the Kansas City, St. Louis and Chicago Railroad
Atchison, Topeka & Santa Fe Ry., - the Missouri, Kansas City, Eastern, Middle, Southern Kansas, Panhandle, Western and Colorado Divisions
Chicago & North Western Ry., - All operations except those in the States of Illinois, Montana, and Wyoming
Chicago Great Western R. R., - the Minnesota Main Line, Minnesota Branch Line, Iowa, and Minnesota (Mason City and Ft. Dodge) Divisions
Chicago, Milwaukee, St. Paul & Pacific R. R., - the Hastings and Dakota, Iowa and So. Minnesota, Trans-Missouri, Iowa and Dakota, LaCrosse and River, Iowa, Duluth, Twin Cities Terminal, Kansas City, Madison, Superior, Iowa and Southern Divisions
Chicago, Rock Island & Pacific Ry., - the Des Moines, Cedar Rapids, Western, and Missouri-Kansas Divisions
Chicago, St. Paul, Minneapolis & Omaha Ry.
Duluth, Missabe & Iron Range Ry.
Duluth, South Shore & Atlantic Ry.
Duluth, Winnipeg & Pacific Ry.
Great Northern Ry., - all lines in the States of Minnesota, Iowa, North Dakota, and South Dakota and the Midland Railway Company of Manitoba
Green Bay & Western R. R.

8. Western Trunk Line, excluding the operations of the Western Trunk Line railroads in Northern Illinois and the operations of Southwestern railroads in Southern Missouri: - Continued

Illinois Central R. R., - Iowa Division, including Freeport District
Lake Superior & Ishpeming R. R.
Minneapolis & St. Louis R. R.
Minneapolis, St. Paul & Sault Ste. Marie, including Wisconsin Central Ry.
Missouri Pacific R. R., - Eastern, Central Kansas, Omaha, Wichita, St. Louis Terminal, Joplin, Missouri, Southern Kansas, and Kansas City Terminal Divisions
Northern Pacific R. R., - lines east of Mandan, North Dakota
Union Pacific R. R., - lines east of Cheyenne, Wyoming
Wabash Ry., - lines west of the Mississippi River

9. Western Trunk Line, including the operations of the Western Trunk Line railroads in Northern Illinois but excluding the Southwestern railroads in Southern Missouri:

This territory includes the railroads designated in Territory No. 8 above plus the railroad operations designated as "operations of Western Trunk Line railroads in Northern Illinois". These latter railroads or portions thereof have already been listed above under Territory No. 3.

10. Mountain Pacific Territory:

Atchison, Topeka & Santa Fe Ry., - the New Mexico, Albuquerque, Arizona, Pecos, Los Angeles, Valley, and San Francisco Terminal Divisions
Chicago & North Western Ry., - State of Wyoming
Chicago, Burlington & Quincy R. R., - States of Montana and Wyoming
Chicago, Milwaukee, St. Paul & Pacific R.R., - Coast and Rocky Mountain Divisions
Colorado & Southern Ry.
Denver & Rio Grande Western R. R.
Denver & Salt Lake Ry.
Great Northern Ry., - lines in the States of Montana, Idaho, Washington, Oregon, and California, and the Nelson and Ft. Shepard Ry., and the Vancouver, Victoria & Eastern Ry. and Navigation Co.
Nevada Northern Ry.
Northern Pacific Ry., - lines west of Mandan, North Dakota
Northwestern Pacific R. R.
Southern Pacific Co. - Pacific Lines
Spokane International Ry.
Spokane, Portland & Seattle Ry.

10. Mountain Pacific Territory: - Continued

Union Pacific R. R., - lines west of Cheyenne, Wyoming
Utah Ry.
Western Pacific R. R.

11. Total, Western Territories:

Includes all the railroads or portions thereof listed under the Southwestern Territory (including operations of Southwestern railroads in southern Missouri), the Western Trunk Line Territory, (including the operations of the Western Trunk Line railroads in northern Illinois) and the Mountain Pacific Territory. See Territories Nos. 7, 9, and 10 above.

12. Total for United States:

Total for all territories, excluding duplications.

As explained in Chapter IV, all cost computations were carried out in full for each railroad individually. Furthermore, where a railroad was assigned to more than one territory, the data were compiled both for the system and for each of the parts. This procedure permits of any desired grouping of the railroads, or, if necessary, the development of the cost scales for individual carriers.

CHAPTER III

Territorial Cost Comparisons

The cost scales and other data developed as a result of this study permit of innumerable territorial comparisons depending upon the phase of the subject under study. A few of the more significant comparisons are shown below. 1/ The cost scales show the costs by types of equipment for ranges of net loads and lengths of haul. A comparison of territorial figures for any given net load serves to indicate the relative cost in each territory providing the load is everywhere the same. Where the load is different, the cost should be based on the loading actually experienced in each territory. This is necessary as the cost is a function of the weight of the load.

Comparisons based on box car traffic assuming uniform load:

Table 1 shows the relative costs in each territory for revenue carload freight moving in box cars for a haul of 300 miles and a net load of 25 tons. For purposes of comparison an index is shown, the costs for the United States average being taken as 100. The cost data are taken from the accompanying cost scales and are based upon the territorial average ratio of empty car-miles to loaded car-miles for box cars. Loss and damage payments are not included. The relative costs are as follows:

New England	- Well above average
Eastern Territories, Southwestern, Western Trunk Line and Mountain Pacific)	- Average or a little above
Southern	- A little below average
Pocahontas	- Well below average

For purposes of these comparisons, the data appearing in columns (5) and (7) of Table 1 are those most significant. The costs shown in column (3) while representing a figure which is above out-of-pocket costs nevertheless is something less than a "subsistence" level as measured in terms of minimum revenue needs on carload traffic.

1/ The comparisons shown are based upon and subject to the approximations in the basic data outlined in Chapter VI.

Table 1. Cost in Cents Per Hundred Pounds of Revenue Carload Freight Moving in Box Cars with a Net Load of 25 Tons a[illegible] Haul of 300 Miles 1/

Territory	Assumed load (tons)	Cost Level II: Carload operating expenses, rents, and taxes		Cost Level IV: Carload operating expenses, rents, and taxes including allowance for less-carload and passenger operating deficits		Cost Level V(b): Carload operating expenses, rents, and taxes including allowance for less-carload and passenger operating deficits, and 5-3/4% return on total valuo	
		Cost	Index	Cost	Index	Cost	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. New England	25	13.2	119	15.4	118	24.6	134
2. Eastern, excluding New England and Northern Illinois	25	11.6	105	13.1	101	18.6	102
3. Eastern, excluding New England but including Northern Illinois	25	11.6	105	13.2	102	18.8	103
4. Eastern, including New England and Northern Illinois	25	11.6	105	13.2	102	18.9	103
5. Pocahontas	25	9.1	82	9.9	76	13.4	73
6. Southern	25	10.4	94	12.1	93	17.2	94
7. Southwestern, including Southern Missouri	25	11.1	100	13.3	102	18.0	98
8. Western Trunk Line, excluding Northern Illinois and Southern Missouri	25	11.0	99	13.5	104	18.9	103
9. Western Trunk Line, including Northern Illinois but excluding Southern Missouri.	25	11.1	100	13.7	105	19.3	105
10. Mountain Pacific	25	11.0	99	13.2	102	18.8	103
11. Total Western Territory	25	11.1	100	13.4	103	18.9	103
12. Total, United States	25	11.1	100	13.0	100	18.3	100

1/ Source: Cost scales. For purposes of comparison the index of cost for the United States equals 100.

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Comparisons based on the average net load obtaining in Southern and Eastern Territories:

The average weight for traffic handled in box cars varies somewhat between territories. However, in making comparisons it is not possible to base the costs for each territory on the average load for all commodities moving in box cars in that territory as the results would reflect not merely the differences in the unit costs of operation but also the differences in the cost of hauling unlike commodities. To overcome this difficulty the procedure may be followed of first computing the cost of hauling the Southern Territory box-car traffic a distance of 300 miles at the average load for each commodity and unit cost thereof obtaining in the South, and secondly, computing the cost of hauling the identical Southern traffic a distance of 300 miles at the average loads and unit costs obtaining in Eastern Territory (Terr. No. 2). 1/ By this process the general average cost found for the Southern Territory would be between 5 and 6 percent lower than that found for the Eastern Territory.

1/ The total tonnage for the commodities handled in box cars in the Southern Territory in 1939 amounted to 65,532,453 tons. (From Freight Commodity Statistics, Statement 40100). The number of carloads required to handle this traffic amounted to 2,821,368. The weighted average load per car was 23.2 tons. If this identical traffic were handled in Eastern Territory, 2,746,992 cars would have been required, at an average of 23.9 tons per car. These latter figures were obtained by dividing the tonnage for each commodity class by the average load for that class obtaining in Eastern Territory No. 2. (For purposes of obtaining average loads the tonnage and carloadings of the Great Lakes and Central Eastern Regions combined were treated as equivalent to Territory No. 2). Costs were computed based respectively upon the weighted averages of 23.2 and 23.9 tons. The figures for the Southern and Eastern Territories were respectively as follows: Cost Level II - 11.0 and 12.0 cents; Cost Level IV - 12.8 and 13.6 cents; and Cost Level V(b) - 13.1 and 19.2 cents.

Under Cost Levels IV and V(b) the costs for the South are between 5 and 6 percent below those for the Eastern Territory.

The procedure was then reversed. The box car traffic for the Eastern Territory No. 2 was found to consist of 185,898,674 tons handled in 7,819,032 cars, or at an average of 23.8 tons per car. This same tonnage if handled in Southern Territory at the average load prevailing in Southern Territory would have required 7,916,885 cars or an average load of 23.5 tons. The costs for the Eastern and Southern Territories were respectively as follows: Cost Level II - 12.1 and 10.9 cents, Cost Level IV - 13.7 and 12.7 cents, and Cost Level V(b) - 19.3 and 18.0 cents.

Under Cost Levels IV and V(b) the costs for the Southern Territory were found to be between 6 and 7 percent below those for the Eastern Territory.

The commodities assumed to move in the respective classes of equipment are shown in Appendix C.

The procedure then may be reversed by computing the cost of handling the Eastern Territory box car traffic for a 300-mile haul first in the Eastern Territory and secondly in Southern Territory. The cost thus found for the Southern Territory would be between 6 and 7 percent lower than that found for the Eastern Territory.

The same procedure may be followed for traffic customarily moving in gondola and hopper cars. Assuming that the consist of Southern traffic was handled first, in Southern Territory and secondly, in the Eastern Territory, the average Southern cost would be 1 or 2 percent below that for Eastern Territory. The average loads developed were 48.3 and 49.5 tons respectively. On the other hand if one assumed that the consist of the Eastern traffic were moved first in Eastern Territory and secondly in Southern Territory the result would indicate that the average cost for the South exceeded that for the East by about 7 percent. The average loads developed for South and East in this case were [illegible] tons and [illegible] tons respectively. The reason for this unfavorable showing for the South is the lighter average loading which in turn is occasioned by substantial differences in the character of the gondola traffic in each territory. The traffic moved in the South consists to a large degree of commodities which have like loading characteristics in each territory. On the other hand the Eastern Territory has substantial movements of certain commodities such as ore which in the South not only move in a relatively smaller volume but also have a lighter loading. Where the consist of the traffic is unlike to the degree here indicated the comparisons have limited significance.

Comparisons based on United States consist of box car traffic:

The above comparisons might have been carried on indefinitely by comparing each territory with each of the others. To shorten the process, the simplified procedure was adopted of computing the relative territorial cost on the assumption that the total United States traffic (1939) customarily moving in box cars was hauled a distance of 300 miles in each territory at the average load for the individual commodities obtaining in each territory. The aggregate cost by territories then was obtained by multiplying the cost per ton by the tonnage handled of each individual commodity and adding the products together. The comparison also may be made by computing the average load by territories weighted as above by the United States consist of commodities and taking the cost for that load directly from the cost scale. This latter method was followed principally although limited use was made of the former method for purposes of verification.

The weighted average load for box cars by territories was obtained as follows: The United States total tonnage carried of each commodity customarily moving in box cars 1/ was divided by the territorial

1/ See Freight Commodity Statistics, Classes 10-101, 150-162, 164, 260-271, 282, 380, 402, 430-440, 442, 443, 452, 453, 470, 471, 512, 520-540, 551-561, 580, 581, 590-620, 640-651, 662-691, 694-701.

average loading for that commodity. This gave the number of cars that would be required in each territory to handle the total United States tonnage of that commodity. The aggregate of the number of cars thus computed by territories for all commodities, divided into the aggregate tonnage for all commodities, produced the weighted average loading by territories shown in Table 2, column (2). The statistical data were taken from the Freight Commodity Statistics for 1939. The data for the Central Eastern and Great Lakes Regions were consolidated to form the Eastern Territory, No. 2. For lack of better information, the average loading for Territory No. 2 also was used for Territory No. 3. As the boundaries of the Southwestern Region (Freight Commodity Statistics) approximate those for the Southwestern Territory, No. 7, the statistical data for the former were used in obtaining average loads for the latter. No data were available on average loads for the Western Trunk Line and Mountain Pacific Territories and hence no comparisons are shown in Table 2 for them. The territorial boundaries of the remaining regions and districts compared closely with those for the territories established in this study.

From the results shown in Table 2, it will be noted that the relation of the territories remains practically unchanged from that found in Table No. 1. The costs for the New England Territory are well above the average, those for the Eastern, Southwestern, and total Western Territories are average or a little above average, those for the Southern Territory are a little below average, while those for the Pocahontas Territory are well below the average.

Table 2. Cost in Cents Per Hundred Pounds Assuming that the Total United States Traffic Customarily Moving in Box Cars Was Hauled 300 Miles in Each Territory at the Average Load for the Individual Commodities Obtaining in Each Territory 1/

Territory	Average load (tons)	Cost Level II: Carload operating expenses, rents, and taxes		Cost Level IV: Carload operating expenses, rents, and taxes including allowance for less-carload and passenger operating deficits		Cost Level V(b) Carload operati expenses, rents and taxes inclu ing allowance f less-carload ar passenger opera ing deficits, e 5-3/4% return o total value	
		Cost	Index	Cost	Index	Cost	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. New England	23.3	14.0	125	16.4	125	26.1	141
2. Eastern, excluding New England and Northern Illinois	24.6	11.8	105	13.4	102	18.9	102
3. Eastern, excluding New England but including Northern Illinois	24.6	11.7	104	13.4	102	18.9	102
4. Eastern, including New England and Northern Illinois	24.4	11.8	105	13.5	103	19.3	104
5. Pocahontas	24.4	9.3	83	10.2	78	13.7	74
6. Southern	24.1	10.6	95	12.3	94	17.5	95
7. Southwestern, including Southern Missouri.	24.6	11.3	101	13.6	104	18.3	99
8. Western Trunk Line, excluding Northern Illinois and Southern Missouri	*	-	-	-	-	-	-
9. Western Trunk Line, including Northern Illinois but excluding Southern Missouri	*	-	-	-	-	-	-
10. Mountain Pacific	*	-	-	-	-	-	-
11. Total Western Territory	25.0	11.1	99	13.5	103	18.9	102
12. Total, United States	24.6	11.2	100	13.1	100	18.5	100

1/ Source: Cost scales with interpolation where necessary. For purposes of comparison, the index of cost for the United States equals 100.

*No data on average net loads available.

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Comparisons based on 50 ton loads in gondola and hopper cars:

The same comparison as that shown above for box cars in Table 1 is repeated below for the traffic handled in gondolas and hopper cars. Table 3 shows the relative costs assuming a uniform load of 50 tons in all territories. 1/ The relative costs were found to be as follows:

New England	- Well above average
Eastern, Southern, Southwestern, Western Trunk Line and Mountain Pacific Territories	- About average
Pocahontas	- Well below average

The relatively less favorable position of the Southern Territory is explained by the relatively high percent empty return for gondola and hopper cars reported by the Southern roads.

1/ United States average is 50.6 tons, 1939.

Table 3. Cost in Cents Per Hundred Pounds for a Haul of 300 Miles and an Average Load of 50 Tons in Gondola and Hopper Cars 1/

Territory	Assumed load (tons)	Cost Level II: Carload operating expenses, rents, and taxes		Cost Level IV: Carload operating expenses, rents, and taxes including allowance for less-carload and passenger operating deficits		Cost Level V(b): Carload operating expenses, rents, and taxes including allowance for less-carload and passenger operating deficits, and 5-3/4% return on total value	
		Cost	Index	Cost	Index	Cost	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. New England	50	9.6	126	11.3	127	17.9	143
2. Eastern, excluding New England and Northern Illinois	50	7.8	103	8.8	99	12.5	100
3. Eastern, excluding New England but including Northern Illinois	50	7.8	103	8.9	100	12.6	101
4. Eastern, including New England and Northern Illinois	50	7.9	104	9.0	101	12.9	103
5. Pocahontas	50	6.2	82	6.8	76	9.1	73
6. Southern	50	7.4	97	8.6	97	12.2	98
7. Southwestern, including Southern Missouri	50	7.4	97	8.9	100	12.0	96
8. Western Trunk Line, excluding Northern Illinois and Southern Missouri	50	7.5	99	9.2	103	12.9	103
9. Western Trunk Line, including Northern Illinois but excluding Southern Missouri.	50	7.5	99	9.2	103	13.1	105
10. Mountain Pacific	50	7.5	99	9.0	101	12.8	102
11. Total Western Territory	50	7.5	99	9.1	102	12.8	102
12. Total, United States	50	7.6	100	8.9	100	12.5	100

1/ Source: Cost scales. For purposes of comparison the index of cost for the United States equals 100.

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Average loads by types of equipment:

The cost comparison shown in Table 3 is only valid where the load in each territory is assumed to be the same. This condition does not obtain as indicated by Table 4 which shows the weighted average load by types of equipment based upon the United States consist of the traffic customarily moving in each type of equipment. The data were compiled on the basis described hereinabove for box cars.

Table 4. Average Weight of Load by Types of Equipment and by Territories Assuming that the Total United States Traffic Customarily Moving in Each Type of Equipment Shown Was Hauled in Each Territory at the Average Load for the Individual Commodities Obtaining in Each Territory

Territory	Box	Gondola and hopper	Flat	Stock	Refrigerator	Tank
1. New England	23.3	46.1	29.7	10.7	14.3	30.1
2. Eastern, excluding New England and Northern Illinois	24.6	51.2	26.7	11.1	14.3	30.5
3. Eastern, excluding New England but including Northern Illinois	24.6	51.2	26.7	11.1	14.3	30.5
4. Eastern, including New England and Northern Illinois	24.4	51.1	27.0	11.1	14.3	30.5
5. Pocahontas	24.4	50.7	27.6	11.0	14.0	30.4
6. Southern	24.1	46.5	31.7	10.7	13.9	30.6
7. Southwestern, including Southern Missouri	24.6	45.6	34.9	10.6	14.0	29.6
8. Western Trunk Line, excluding Northern Illinois and Southern Missouri	*	*	*	*	*	*
9. Western Trunk Line, including Northern Illinois but excluding Southern Missouri	*	*	*	*	*	*
10. Mountain Pacific	*	*	*	*	*	*
11. Total Western Territory	25.0	43.6	35.1	11.0	14.5	30.0
12. Total, United States	24.6	50.6	34.4	11.0	14.4	30.3

*No data as to average load.

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From Table 4 it will be noted that where the consist of the traffic is the same the territorial average loads for each type of equipment are very similar except in the case of gondola and hopper cars and flat cars. The further conclusion may be drawn that where the territorial average loads for box cars (based on the consist of the box car traffic moving in each territory) are found to differ, such difference is principally occasioned by the fact that the territories are handling different proportions of heavy-loading or light-loading commodities. Costs based upon such average loads, therefore, reflect not merely territorial differences in the unit costs of operation, but also the usual differences in cost arising from the handling of unlike commodities.

Comparisons for anthracite and bituminous coal:

The principal classes of traffic customarily handled in gondola and hopper cars are anthracite and bituminous coal. Table 5 provides cost comparisons based upon the average loading of anthracite coal in gondola and hopper cars experienced for each territory (1939). It will be noted that the relative costs for the Southern, Southwestern and Western Territories rises sharply compared to the average for the United States. This is explained by the lighter loading reported for anthracite in these territories.

The same comparison is made in Table 6 for bituminous coal. It will be noted that the costs shown for the Southern Territory approximate the United States average while those for the Western Territories exceed the United States average. The difference between this showing and that appearing in Table 3 (based on 50 ton loads) is accounted for by the territorial differences in the loading of bituminous coal.

Table 5. Cost in Cents Per Hundred Pounds for Anthracite Coal for a 300-Mile Haul in Each Territory. Based on the Average Net Load Obtaining in Each Territory 1/

Territory	Average load (tons)	Cost Level II: Carload operating expenses, rents, and taxes		Cost Level IV: Carload operating expenses, rents, and taxes including allowance for less-carload and passenger operating deficits		Cost Level V(b): Carload operating expenses, rents, and taxes including allowance for less-carload and passenger operating deficits, and 5-3/4% return on total value	
		Cost	Index	Cost	Index	Cost	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. New England	47.4	10.0	132	11.7	131	18.6	149
2. Eastern, excluding New England and Northern Illinois	50.5	7.8	103	8.8	99	12.5	100
3. Eastern, excluding New England but including Northern Illinois	50.5	7.8	103	8.9	100	12.6	101
4. Eastern, including New England and Northern Illinois	50.3	7.9	104	9.0	101	12.9	103
5. Pocahontas	47.6	6.4	84	7.0	79	9.4	75
6. Southern	37.1	9.2	121	10.7	120	15.2	122
7. Southwestern, including Southern Missouri.	39.1	8.9	117	10.7	120	14.4	115
8. Western Trunk Line, excluding Northern Illinois and Southern Missouri	*	-	-	-	-	-	-
9. Western Trunk Line, including Northern Illinois but excluding Southern Missouri	*	-	-	-	-	-	-
10. Mountain Pacific	*	-	-	-	-	-	-
11. Total Western Territory	30.3	10.8	142	13.1	147	18.4	147
12. Total, United States	50.1	7.6	100	8.9	100	12.5	100

*No data on average net loads available.

1/ Source: Cost scales with interpolation where necessary. For purposes of comparison, the index of cost for the United States equals 100.

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Comparisons on less-carload traffic:

The above comparisons all have been based on carload traffic. Table 7 below provides a comparison based on less-carload traffic. The explanation made hereinabove that the costs represent a weighted average of all operating conditions, i.e., through trains, way trains, etc., is reiterated. If any commodity or any class of traffic characteristically moves in a heavier than average, or lighter than average trains, the costs developed for that commodity or class of traffic will be in some measure overstated or understated. Attention is called in Table 7 to the comparatively low costs for handling less-carload traffic on the Pocahontas Lines. This cost is correct only if the less-carload traffic is handled in the average weight train operated by these lines. Should this traffic be handled in relatively light-weight merchandise trains the costs shown are understated in some degree. 1/

The costs shown in Table 7 are based on an assumed average load of 5 tons. The costs for New England, Western Trunk Line and Mountain Pacific Territories exceed the United States average, those for the Eastern and Southwestern Territories approximate such average, while the costs for the Pocahontas and Southern Territories are below the average. As explained in Chapter VI, the less-carload cost data are subject to some error in certain territories because of the failure to obtain an accurate separation of the station expenses between clerical and platform. This error is not sufficient, however, to change significantly the territorial relationships shown.

Table 8 shows the cost based on the territorial average load developed from the data appearing in Senate Resolution 146, 76th Congress, 1st Session, Railway Handling of Less-than-carload Freight, Forwarder Traffic, page 17, column 15. Based on Table 8 the costs for the New England and the Western Territories exceed the average while those for the Eastern, Pocahontas and Southern Territories are below the average. The low cost shown for the Eastern Territories is attributable to the relatively high average load experienced.

1/ See discussion of the effect of the weight of the trainload on cost, Chapter VI.

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Table 8. Costs in Cents per Hundred Pounds of Less-Carload Freight for a Haul of 300 Miles in Each Territory Based on Average Load by Territories 1/

	Territory	Average load (tons)	Less-carload operating expenses rents and taxes		Less-carload operating expenses, rents, and taxes, including 5-3/4 percent return on less-carload portion of value	
			Cost	Index	Cost	Index
	(1)	(2)	(3)	(4)	(5)	(6)
1	New England	5.1	79.6	113	104.2	113
2	Eastern, excluding New England and Northern Illinois	6.5	64.8	92	84.2	91
3	Eastern, excluding New England but including Northern Illinois	6.5	66.0	93	86.3	93
4	Eastern, including New England and Northern Illinois	6.4	66.5	94	87.0	94
5	Pocahontas	5.6	61.5	87	80.1	87
6	Southern	5.5	61.0	86	79.3	86
7	Southwestern, including Southern Missouri	4.6	78.8	111	101.6	110
8	Western Trunk Line, excluding Northern Illinois and Southern Missouri	*	-	-	-	-
9	Western Trunk Line, including Northern Illinois but excluding Southern Missouri.	*	-	-	-	-
10	Mountain Pacific	*	-	-	-	-
11	Total Western Territory	4.3	85.3	121	112.5	122
12	Total, United States	5.4	70.7	100	92.4	100

1/ Source: Cost scales with interpolation where necessary. For purposes of comparison, the index of cost for the United States equals 100.

* No data as to average load.

Table 6. Cost in Cents Per Hundred Pounds for Bituminous Coal for a 300-Mile Haul in Each Territory. Based on the Average Net Load Obtaining in Each Territory 1/

Territory	Average load (tons)	Cost Level II: Carload operating expenses, rents, and taxes		Cost Level IV: Carload operating expenses, rents, and taxes including allowance for less-carload and passenger operating deficits		Cost Level V(b): Carload operating expenses, rents, and taxes including allowance for less-carload and passenger operating deficits, and 5-3/4% return on total value	
		Cost	Index	Cost	Index	Cost	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. New England	51.8	9.4	131	11.0	131	17.5	147
2. Eastern, excluding New England and Northern Illinois	54.8	7.3	101	8.3	99	11.7	98
3. Eastern, excluding New England but including Northern Illinois	54.8	7.3	101	8.3	99	11.8	99
4. Eastern, including New England and Northern Illinois	54.7	7.4	103	8.5	101	12.1	102
5. Pocahontas	58.8	5.5	76	6.0	71	8.1	68
6. Southern	51.3	7.3	101	8.5	101	12.0	101
7. Southwestern, including Southern Missouri.	47.0	7.8	108	9.4	112	12.6	106
8. Western Trunk Line, excluding Northern Illinois and Southern Missouri	*	-	-	-	-	-	-
9. Western Trunk Line, including Northern Illinois but excluding Southern Missouri	*	-	-	-	-	-	-
10. Mountain Pacific	*	-	-	-	-	-	-
11. Total Western Territory	45.1	8.1	113	9.8	117	13.8	116
12. Total, United States	53.8	7.2	100	8.4	100	11.9	100

*No data on average net loads available.

1/ Source: Cost scales with interpolation where necessary. For purposes of comparison, the index of cost for the United States equals 100.

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Table 7. Costs in Cents per Hundred Pounds of Less Carload Freight for a Haul of 300 Miles, Net Load of 5 Tons 1/

Territory	Load (tons)	Less carload operating expenses rents and taxes		Less-carload operating expenses, rents, and taxes, including 5½ percent return on less-carload portion of value	
		Cost	Index	Cost	Index
(1)	(2)	(3)	(4)	(5)	(6)
1 New England	5	80.5	110	105.4	110
2 Eastern, excluding New England and Northern Illinois	5	74.8	102	97.2	101
3 Eastern, excluding New England but including Northern Illinois	5	76.0	103	99.4	103
4 Eastern, including New England and Northern Illinois	5	75.9	103	99.3	103
5 Pocahontas	5	65.0	88	84.6	88
6 Southern	5	64.2	87	83.4	87
7 Southwestern, including Southern Missouri	5	75.4	103	97.2	101
8 Western Trunk Line, excluding Northern Illinois and Southern Missouri	5	79.5	108	104.9	109
9 Western Trunk Line, including Northern Illinois but excluding Southern Missouri.	5	80.8	110	107.6	112
10 Mountain Pacific	5	77.6	106	102.0	106
11 Total Western Territory	5	79.0	107	104.2	108
12 Total, United States	5	73.5	100	96.1	100

1/ Source: Cost scales. For purposes of comparison the index of cost for the United States equals 100.

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Comparisons between railroads within a territory:

Very substantial variations exist in the costs for individual railroads within a territory. Tests were made in this matter by developing cost scales for Cost Levels II, IV and V and for distances of 50, 100, 300 and 500 miles. The railroads selected were the following:

New England:
- Boston & Maine R.R.
- Maine Central R.R.
- New York, New Haven & Hartford R.R.

Eastern, excluding New England:
- Baltimore & Ohio R.R.
- Erie R.R.
- Lehigh Valley R.R.
- New York Central R.R.
- Pennsylvania R.R.

Southern:
- Atlantic Coast Line R.R.
- Seaboard Air Line Ry.
- Southern Ry.

Southwestern:
- St. Louis Southwestern Ry.
- Texas & New Orleans R.R.
- Texas & Pacific Ry.

Mountain Pacific:
- Denver & Rio Grande Western R.R.
- Southern Pacific
- Western Pacific R.R.

Although the cost comparisons were based on identical lengths of haul and identical loads (25 tons moving in box cars) the variations found between carriers in every territory ranged from 10 to 15 percent and in some territories were still higher. Each carrier's costs were based on the percent empty return reported by it for box cars, except in the case of the New York Central where the territorial average was used, no data being available. The differences in the percent of empty return movement were not great enough to account for more than a very small portion of the differences in costs between carriers. These comparisons did not reflect the added variations in cost that would be occasioned by the differences in the circuity of the respective routes for competing railroads.

Comparisons for other lengths of hauls:

The above figures represent but a few of the comparisons available from the cost scales, reference to which will provide the data for any desired length of haul. Comparisons based on shorter or longer hauls than 300 miles would change the relationships in some degree. On short hauls of 50 miles the percent by which the cost shown for New England exceeds the United States average would be reduced while the advantage shown for the Southern Territory would be increased. On hauls longer than 300 miles the relatively high cost for the New England Territory would be still further increased while the relative advantage enjoyed by the Southern Territory (box car traffic) would be decreased. This is explained by the fact that while the terminal costs in New England approximate the United States average, the line-haul costs are substantially in excess of such average. The terminal costs for the Southern Territory are substantially lower than the United States average while the line-haul costs are only slightly lower.

Compensatory character of rate structures:

The comparisons shown above have dealt with individual traffic movements. The following comparisons are for the purpose of testing the compensatory character of territorial rate structures, less-carload, carload and passenger. The territories shown were selected to avoid, insofar as possible, the need for a territorial separation of a carrier's revenues.

Compensatory character of less-carload rate structures:

The compensatory character of the less-carload rate structures by territories may be tested by comparing the territorial less-carload expenses with the territorial less-carload revenues. A comparison follows based insofar as possible on the territorial grouping established for the purpose of this study.

Table 9. Comparison of Less-carload Revenues with Less-carload Expenses Based on the Territorial Grouping Used for This Study

Territory 1/	Less-carload revenues 2/	Less-carload operating expenses, rents and taxes, plus payments to others for pick-up and delivery 3/	Deficit
(1)	(2)	(3)	(4)
New England	$17,493,370	$21,040,227	$3,546,857
Eastern, excluding New England and northern Illinois	89,923,687	115,402,315	25,478,628
Total Eastern, including New England but excluding northern Illinois	107,417,057	136,442,542	29,025,485
Pocahontas	8,742,308	9,542,851	800,543
Southern	46,484,178	49,506,990	3,022,812
Western (including northern Illinois	88,688,184	124,078,980	35,390,796
United States	251,331,727	319,571,363	68,239,636

1/ Although the territories were grouped to eliminate as far as possible the need for separating the revenues of an individual railroad between territories, such separation nevertheless had to be made in the following six cases: Separation of the New York Central between the Boston and Albany and all other lines; separation of the Louisville and Nashville between Southern Territory and the Eastern Territory; separation of the Chicago, Milwaukee, St. Paul and Pacific between Western Territory and Eastern Territory; separation of the Illinois Central between Southern, Eastern and Western Territories; separation of St. Louis-San Francisco between Southern and Southwestern Territories; separation of the Wabash between Lines East and West of the Mississippi. Except in the case of the B.& A. the territorial separations of the revenues and the payments to others for pick-up and delivery were made on the basis of the less-carload expenses. This treatment was followed as the costs closely reflect the distribution of the volume of less-carload traffic which in turn provides a measure for the distribution of the revenues received from such traffic. The revenues of the Boston and Albany were obtained direct from Freight Commodity Statistics, Statement No. 40100.

2/ From Annual Report, schedule 541, class 710, column (1).

3/ Costs shown consist of Cost Level II plus payments for pick-up and delivery service from Annual Report, schedule 310, sum of lines (a), (b), and (c) in footnote. Costs exclude allowance for a return on value.

The following table was developed to provide a similar comparison as above but excluding any territorial separation of a carrier's revenues and expenses. Carriers operating in more than one territory have been assigned to a single territory according to the regional grouping described in the "Statistics of Railways in the United States," 1/ 1935, p. S-2, S-3.

Table 10. Comparison of Less-carload Revenues with Less-carload Expenses Based on the Assignment of Each Carrier to a Single Territory

Territory 1/ (1)	Less-carload revenues 2/ (2)	Less-carload operating expenses, rents and taxes, plus payments to others for pick-up and delivery 3/ (3)	Deficit (4)
New England	$16,573,462	$18,242,427	$1,668,965
Eastern excluding New England	89,775,200	117,275,009	27,499,809
Eastern including New England	106,348,662	135,517,436	29,168,774
Pocahontas	8,742,308	9,542,851	800,543
Southern	49,888,779	53,312,448	3,423,669
Western	86,351,978	121,198,628	34,846,650
United States	251,331,727	319,571,363	68,239,636

1/ For purposes of Table 10 the following reassignment of carriers operating in more than one territory has been made: Boston and Albany included with New York Central in Eastern Territory; Louisville and Nashville included in Southern Territory; Chicago, Milwaukee, St. Paul and Pacific included in Western Territory; Illinois Central included in Southern Territory; St. Louis-San Francisco included in Western Territory; Wabash included in Eastern Territory.

2/ From Annual Report, schedule 541, class 710, column (1).

3/ Costs shown consist of Cost Level II plus payments for pick-up and delivery service from Annual Report, schedule 310, sum of lines (a), (b), and (c) in footnote. Costs exclude allowance for a return on value.

As indicated by the above Tables 9 and 10, the less-carload revenues in all territories failed to cover the less-carload operating expenses, rents and taxes, including payments to others for pick-up and delivery. In view of this situation the significant question arises as to whether the less-carload revenues cover the out-of-pocket costs occasioned by the existence of the less-carload traffic.

Tables 11 and 12 make this comparison based on the assumption that the less-carload out-of-pocket costs constitute 80 percent 1/ of the total operating expenses, rents and taxes (excluding pick-up and delivery) assigned and apportioned to the less-carload service. The payments to others for pick-up and delivery have been added to the out-of-pocket costs so computed. Table 11 shows a comparison of the territorial revenues and expenses based on the territorial grouping used for this study. Table 12 provides a comparison with the carriers assigned solely to one territory. The territorial grouping for Tables 11 and 12 are the same as those indicated for Tables 9 and 10, respectively.

1/ Under the assumptions set forth in Chapter V hereto, the out-of-pocket portion of the less-carload operating expenses, rents and taxes approximates 68 percent of the total operating expenses, rents and taxes (Cost Level II). This percentage does not take into consideration certain taxes, other than payroll taxes, the existence of which may be occasioned by the less-carload service; the maintenance chargeable to the warehouse or platform portion of the station buildings; or the savings from the possible elimination of stations if the less-carload traffic were abandoned. No allowance is made for a return on the facilities or equipment used in this service nor for the fact that if all less-carload service were eliminated the station platform expenses found variable with the traffic volume would be 100 percent rather than 90 percent. The comparisons here being made are concerned with the out-of-pocket cost as a whole of providing the less-carload service. This concept involves assumptions somewhat different from those obtaining when the out-of-pocket cost of handling added units of less-carload traffic is under consideration.

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Table 11.- Comparison of Less-carload Revenues with the Less-carload Out-of-pocket Costs Based on Territorial Grouping Used for This Study

Territory (1)	Less-carload revenues 1/ (2)	Less-carload out-of-pocket costs (rail) plus payments to others for pick-up and delivery (3)	Excess or deficit as related to out-of-pocket costs (4)
New England	$17,493,370	$16,832,182	$661,188
Eastern, excluding New England and northern Illinois	89,923,687	92,321,852	d 2,398,165
Total Eastern, including New England but excluding northern Illinois	107,417,057	109,154,034	d 1,736,977
Pocahontas	8,742,308	7,634,281	1,108,027
Southern	46,484,178	39,605,592	6,878,586
Total Western	88,688,184	99,263,184	d 10,575,000
United States	251,331,727	255,657,091	d 4,325,364

d Deficit
1/ From Annual Report, schedule 541, class 710, column (1).

Table 12. Comparison of Less-carload Revenues with Less-carload Out-of-pocket Costs Based on the Assignment of Each Carrier to a Single Territory

Territory (1)	Less-carload revenues (2)	Less-carload out-of-pocket costs (rail) plus payments to others for pick-up and delivery (3)	Excess or deficit as related to out-of-pocket costs (4)
New England	$16,573,462	$14,593,942	$1,979,520
Eastern, excluding New England and northern Illinois	89,775,200	93,820,007	d 4,044,807
Total Eastern, including New England but excluding northern Illinois	106,348,662	108,413,949	d 2,065,287
Pocahontas	8,742,308	7,634,281	1,108,027
Southern	49,888,779	42,649,958	7,238,821
Total Western	86,351,978	96,958,903	d 10,606,925
United States	251,331,727	255,657,091	d 4,325,364

d Deficit.

The results shown in column (4) of the above table were based on the assumption that the rail out-of-pocket cost of maintaining the less-carload service constitutes 80 percent of the total rail less-carload operating expenses, rents and taxes. As explained in Chapter V, the figure of 80 percent necessarily represents an approximation. However, the general conclusion can be drawn that the less-carload rate structures for all territories taken together yield approximately out-of-pocket costs in the aggregate with the least favorable showing in the east and west.

Compensatory character of the passenger rate structure:

The compensatory nature of the passenger rate structure by territories may also be obtained by comparing the territorial passenger-train expenses with the territorial passenger-train revenues. This comparison is made in Table 13.

Because of the inability to separate the passenger revenues of an individual railroad between territories, the following comparison is based upon the districts and regions shown in the "Statistics of Railways in the United States," 1935, p. S-2, S-3. The territorial designation in Table 13 reading "Eastern District, excluding the New England Region," includes those railroads assigned to the Great Lakes Region and the Central Eastern Region.

Table 13. Comparison of Passenger Revenues with Passenger Expenses

Territory (1)	Operating revenues of passenger and allied services 1/ (2)	Operating expenses, rents and taxes for passenger and allied services 2/ (Cost Level II) (3)	Deficit under Cost Level II 3/ (4)
New England Region	$49,938,765	$57,502,388	$7,563,623
Eastern District excluding New England Region	275,284,818	350,354,999	75,070,181
Eastern District including New England Region	325,223,583	407,857,387	82,633,804
Pocahontas Region	12,616,785	23,293,448	10,676,663
Southern Region	74,919,313	107,313,032	32,393,219
Western District	219,275,727	344,505,931	125,230,204
United States	632,035,908	882,969,798	250,933,890

The results shown in Table 13 indicate that the passenger service fails by a substantial margin in all territories to meet the expenses assigned and apportioned to it. Table 14 was developed to provide an approximate answer to the significant question as to whether the revenues from the passenger and allied services were sufficient to cover the out-of-pocket costs occasioned by the existence of this service. For the purpose of this comparison, the out-of-pocket expenses were treated as including all expenditures solely related to the passenger service and, in addition the following: the apportioned expenses for locomotive repairs and depreciation, the apportioned expenses for yard accounts 377 to 391 (excluding account 388), the apportioned expenses for miscellaneous operations (accounts 441 to 446), the total passenger portion of equipment and joint facility rents, and the estimated passenger portion of the payroll taxes.4/ This treatment provides no allowance for the apportioned maintenance of way expenses, accounts 202-221 (a large percent of which is affected by use); the apportioned expense for dispatching, signal and interlocker operations and general overhead; the passenger portion of the cost of hauling nonrevenue freight traffic (approximately

1/ Source: Preliminary Abstract, Summary No. 3, 1939.
2/ Source: District data from Preliminary Abstract, Summary No. 1, 1939. Regional data from Bureau of Statistics working papers used in compiling Preliminary Abstract.
3/ See also the passenger deficit by territories shown in the Cost Scales, Table 87, column (50). The difference between the deficit for the United States there shown of $291,228,105 and that appearing in Table 13 is occasioned by the allowance for the passenger portion of the cost of hauling nonrevenue freight traffic.
4/ The payroll taxes were separated between freight and passenger on the basis of operating expenses.

$40,000,000); or a return upon the investment in passenger station facilities, passenger yard facilities, and passenger train equipment. Because of the exclusion of these items, the out-of-pocket expenses shown in Table 14 undoubtedly understate the adied expenses occasioned by the existence of the passenger and allied services.

Table 14. Comparison of Passenger Revenues with Passenger Out-of-pocket Costs

Territory (1)	Operating revenues of passenger and allied services 1/ (2)	Out-of-pocket costs for passenger and allied services 1/ (3)	Excess or deficit as related to out-of-pocket cost (4)
New England Region	$49,938,765	$41,680,250	$8,258,515
Eastern District excluding New England Region	275,285,818	263,272,452	12,012,366
Eastern District including New England Region	325,223,583	304,952,702	20,270,881
Pocahontas Region	12,616,785	16,144,080	d 3,527,295
Southern Region	74,919,813	77,851,242	d 2,931,429
Western District	219,275,727	242,425,763	d 23,150,036
United States	632,035,908	641,373,787	d 9,337,879

As stated hereinabove, the out-of-pocket deficit thus developed is an economic burden upon the freight traffic. 2/ Based on the figures shown in Table 14, column (4), the deficit constitutes 2 percent or less of the carload revenues for the Pocahontas, Southern and Western Regions and about 0.3 percent of the carload revenues for the United States as a whole.

d Deficit

1/ The district data as to revenues and expenses were compiled from Statistics of Railways in the United States, 1939, Tables 113-A and 86, respectively, and the Bureau of Statistics work sheets used in compiling the above-mentioned publication. Payroll taxes by territories were taken from the monthly reports of revenues and expenses, Statement M-100.

2/ See Chapter I, page 4.

Compensatory character of the carload rate structure:

The compensatory character of the carload rate structure by territories may be tested by comparing the carload revenues with one or more levels of carload operating expenses. For purposes herein, the comparisons are made with Carload Cost Levels I, IV, and V(b). These carload cost levels (or levels of revenue needs) were selected as being the most significant for the purpose.

Table 15 provides a comparison based, insofar as possible, on the territorial grouping used for this study. Where a railroad was assigned to more than one territory, the carload revenues were apportioned between the territories on the basis of the separation of the carload operating expenses, rents and taxes. 1/

Table 16 provides a similar comparison with the exception that each carrier is assigned solely to one territory. 2/ The out-of-pocket costs; Cost Level I, were computed by taking 80 percent of Cost Level II. See Chapter V for treatment of out-of-pocket costs.

1/ See Table 9, footnote 1, for list of railroads assigned to more than one territory.

2/ See Table 10, footnote 1, for assignment of railroads to territories.

Table I5. Comparison of Carload Revenues with Several Levels of Carload Cost Based on Territorial Grouping Used for This Study

Territory	Carload revenues 1/	Cost Level I, out-of-pocket costs		Cost Level IV, includes less-carload and passenger operating deficits but excludes return		Cost Level V(b) includes less-carload and passenger operating deficits and a return at 5½	
		Expenses	Relation of revenues to expenses	Expenses	Relation of revenues to expenses	Expenses	Relation of revenues to expenses
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
New England	$105,884,095	$58,035,698	182.4%	$85,047,622	124.5%	$134,992,259	78.4%
Eastern, excl. New England and northern Illinois	1,226,727,770	689,988,733	177.8	977,943,747	125.4	1,378,831,467	89.0
Total Eastern, incl. New England but excl. northern Illinois	1,332,611,865	748,024,431	178.2	1,062,991,369	125.4	1,513,823,726	88.0
Pocahontas	214,698,415	101,511,749	211.5	138,690,406	154.8	186,376,069	115.2
Southern	355,079,647	190,067,707	186.8	275,746,070	128.8	391,573,297	90.7
Total Western	1,221,199,548	683,177,010	178.8	1,035,516,017	117.9	1,455,920,201	83.9
United States	3,123,589,475	1,722,780,897	181.3	2,512,943,862	124.3	3,547,693,393	88.0

1/ Carload revenues by territories taken from the Freight Commodity Statistics, Statement 40100, Table 3, Commodity Class 550. "Freight revenue" means the reporting carrier's gross freight revenue without adjustments for absorptions or corrections, except as to those carriers which report their freight revenue on a net basis in the Freight Commodity Statistics. Inclusion of the gross freight revenue without adjustments for the absorption of the switching charges of other Class I carriers in the same territory will not affect the comparison shown as the territorial gross revenues are compared with the total territorial expenses. The remaining absorptions covering services the expenses for which are not included in the costs shown in the table may result in an overstatement of the revenues of from 1 to 3 percent in the several territories and an overstatement of something less than 2 percent for the United States as a whole.

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Table 16. Comparison of Carload Revenues with Carload Costs Based on the Assignment of Each Carrier to a Single Territory

Territory	Carload revenues 1/	Cost Level I, out-of-pocket costs		Cost Level IV, includes less-carload and passenger operating deficits but excludes return		Cost Level V(b) includes less-carload and passenger operating deficits and a return at 5 3/4%	
		Expenses	Relation of revenues to expenses	Expenses	Relation of revenues to expenses	Expenses	Relation of revenues to expenses
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
New England	$97,568,518	$53,096,015	183.8%	$78,089,278	124.9%	$122,288,147	79.8%
Eastern, excl. New England and northern Illinois	1,204,436,327	679,039,923	177.4	962,704,852	125.1	1,362,320,570	88.4
Total Eastern, incl. New England but excl. northern Illinois	1,302,004,845	732,135,938	177.8	1,040,794,130	125.1	1,484,608,717	87.7
Pocahontas.....	214,698,415	101,511,749	211.5	138,690,406	154.8	186,376,069	115.2
Southern	404,261,822	216,905,887	186.4	312,576,446	129.3	444,097,628	91.0
Total Western	1,202,624,393	672,227,323	178.9	1,020,882,880	117.8	1,432,611,579	83.9
United States	3,123,589,475	1,722,780,897	181.3	2,512,943,862	124.3	3,547,693,993	88.0

1/ Carload revenues by territories taken from the Freight Commodity Statistics, Statement 40100, Table 3, Commodity Class 850. "Freight revenue" means the reporting carrier's gross freight revenue without adjustments for absorptions or corrections, except as to those carriers which report their freight revenue on a net basis in the Freight Commodity Statistics. Inclusion of the gross freight revenue without adjustments for the absorption of the switching charges of other Class I carriers in the same territory will not affect the comparison shown as the territorial gross revenues are compared with the total territorial expenses. The remaining absorptions covering services the expenses for which are not included in the costs shown in the table may result in an overstatement of the revenues of from 1 to 3 percent in the several territories and an overstatement of something less than 2 percent for the United States as a whole.

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An analysis of Tables 15 and 16 indicates that the carload revenues for the United States approximate 181 percent of the out-of-pocket costs of handling carload traffic, 124 percent of the carload operating expenses, rents and taxes increased for less-carload and passenger deficits, and 88 percent of those revenues necessary to cover all expenses, and, in addition, provide a return of 5¾ percent upon the total property valuation. These percentages vary somewhat by territories. It will be noted that the carload revenues on the average should practically double the out-of-pocket expenses shown if the carriers were to earn a 5¾ percent return. However, as Tables 15 and 16 indicate, the carload revenues, except in the Pocahontas Territory, are insufficient to yield this rate of return. The rate realized in 1939 from all traffic, including passenger-train traffic, is shown by territories in Table 17 below. The return is based upon the recommended rate-making values furnished by the Bureau of Valuation for the purpose of this study.

Table 17. Rate of Return for Class I Carriers by Territories - 1939. Includes All Services 1/

Territory	Percent
New England	2.48
Eastern excluding New England and northern Illinois	3.36
Eastern excluding New England but including northern Illinois	3.22
Total Eastern, including New England and northern Illinois	3.15
Pocahontas	9.29
Southern	3.50
Southwestern including southern Missouri	2.46
Western Trunk Line excluding northern Illinois and southern Missouri	2.42
Western Trunk Line including northern Illinois but excluding southern Missouri	2.31
Mountain Pacific	2.71
Total Western, including Southwestern, Western Trunk Line and Mountain Pacific	2.47
Total United States	3.24

1/ See Cost Scales, Table 87, column (75).

CHAPTER IV

Procedure Used in the Computation of Costs

Cost formula:

For the purpose of this study, a cost formula designated as Rail - Form A was developed and applied to each railroad individually, or to each portion of a railroad where it was assigned to more than one territory. The formula provided for the following: 1/

1. The freight maintenance of equipment and rental expenses were separated first, between classes of equipment and secondly, between running, switching and station services as follows:

   (a) The expenses for steam and other locomotives were separated between road and yard.

   (b) The freight-train car expenses were separated between those cars rented on a "mileage basis" and "all other cars".

   (c) The freight-train car expenses for "all other cars" were separated between the mileage and time portions of such expenses.

      (1) The mileage portion of this expense was next separated between the running service and the switching service on the basis of the equated car-miles in each service. 2/ The switching portion thus obtained was separated on an equated car-handled basis between (a) origin and destination switching 3/ and (b) that switching which is includible in the running service, i.e., interchange switching, intermediate switching, and intertrain and intratrain switching.

1/ The formula applied to each railroad consisted of 8 schedules (21 pages). The territorial summaries consisted of 4 schedules (12 pages).

2/ See Appendix A for explanation of switching, car-mile and car-day factors.

3/ Includes carrier terminal switching and connection terminal switching. See Appendix E for definition of the classes of switching.

(2) The time portion of such freight-train car expense was separated between running and switching on an active car-day basis. 1/ The switching portion thus obtained was separated on an active car-day basis between (a) origin and destination switching 2/ and (b) that switching which is includible in the running service, i.e., interchange switching, intermediate switching, and intertrain and intratrain switching.

(d) Where a carrier's operations were assigned to more than one territory, the following additional steps were taken:

(1) Where the data were available, the locomotive repairs were separated between territories on the basis of the repair expenses by classes of locomotives and the mileage run by each class in each territory. Locomotive depreciation, retirements and rents were separated on a locomotive ton-mile basis.

(2) Where the carrier could not supply the data by classes of locomotives, 40 percent of the road locomotive expenses for repairs, depreciation, retirements and rents were separated on a locomotive-mile basis and 60 percent were separated on a locomotive ton-mile basis. 3/ The corresponding expenses for yard locomotives were separated on a yard engine-hour basis.

1/ See Appendix A for explanation of switching, car-mile and car-day factors.

2/ Includes carrier terminal switching and connection terminal switching. See Appendix B for definition of the classes of switching.

3/ Based on (a) study by the Engineering Section, Bureau of Valuation, and (b) study by the California Railroad Commission, in Case 4402, Ex. 2, pages 182-186. These studies indicate (a) that 50 percent of the locomotive repair costs per mile are proportional to the weight of the locomotive, (b) that the remaining 50 percent are independent of the weight of the locomotive, and (c) that the retirements and depreciation per locomotive-mile are 100 percent proportional to the locomotive weight. These factors when applied to the repairs, retirements and depreciation of all Class I carriers resulted in the factors indicated (to nearest even five percent).

(3) Freight-train car expenses, running portion, were separated on the basis of the equated car-miles in each territory.

(4) Freight-train car expenses, time portion, were separated on the basis of the active car-days in each territory.

The necessary data as to car-miles were supplied by the carriers in answer to a questionnaire dated November 19, 1940.

2. The freight expenses for maintenance of way and structures and transportation were separated between running service, switching service, station service, special services and general overhead. Where a railroad's operations were assigned to more than one territory, the carrier was requested to furnish a breakdown of its maintenance of way and transportation expenses by territories. (See questionnaire dated November 23, 1939.)

3. The passenger portion of the cost of transporting nonrevenue freight in freight trains was computed and assigned to the passenger service.

4. The items of expense were grouped and the total of the expenses for each group was distributed to the traffic movements on the basis of the service units with which the expenses were functionally related.

The expenses chargeable to the carload traffic were distributed on the basis of the service units listed below:

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Service Units Used for Carload Traffic

Expense group (1)	Service unit (2)
I. Freight-train car maintenance and rental expenses for "Other than mileage" cars in running service. (Revenue cars only)	Revenue car-miles "other than mileage" cars (excluding nonrevenue and caboose car-miles. 1/
II. Miscellaneous running expenses common to all cars, distributable on a car-mile basis (includes expense for interchange, intertrain and intratrain switching).	Revenue car-miles, including "mileage cars".
III. Remaining running expense.	Revenue gross ton-miles of cars and contents (excluding cabooses)
IV. Switching expenses for carrier or connection terminal switching at point of origin or destination, industry and team tracks.	Revenue carloads originated or terminated.
VI. Freight-train car maintenance and rental expenses for "other than mileage" cars, account carrier or connection terminal switching, plus detention for loading and unloading.	Revenue carloads originated or terminated.
VIII. Carload station expenses.	Revenue carloads originated or terminated, (i.e., consignments)

1/ Mileage cars mean cars rented on a mileage basis, principally tank and refrigerator cars. All other cars are designated as "other than mileage" cars. Where costs are computed for mileage cars, the car hire of 1.5 cents or 2.0 cents per mile replaces the Group I and Group VI expenses.

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The expenses chargeable to the less-carload traffic were distributed on the basis of the following service units:

Service Units Used for Less-Carload Traffic

Expense group (1)	Service unit (2)
I. Same as for carload.	-
II. Same as for carload.	-
III. Same as for carload.	-
IV. Switching expenses for carrier or connection terminal switching at point of origin or destination, freighthouse tracks.	Less-carload loaded cars originated or terminated.
V. Switching expenses for carrier or connection terminal switching at less-carload transfer points.	Less-carload loaded car-miles.
VI. Freight-train car maintenance and rental expenses for "other than mileage" cars account carrier or connection terminal switching plus detention for loading or unloading, at origin or destination point.	Less-carload loaded cars.
VII. Freight-train car maintenance and rental expenses for "other than mileage" cars account carrier or connection terminal switching plus detention for loading or unloading at transfer points.	Less-carload loaded car-miles.
VIII. Less-carload station expenses, other than platform.	Less-carload tons originated plus the tons terminated.
IX. Less-carload station platform expenses, origin or destination handling.	Less-carload tons originated plus the tons terminated.
X. Less-carload station platform expenses account transfer.	Less-carload net ton-miles.

5. The weighted average unit costs by territories were obtained by summarizing the expenses and service units by territories and dividing the aggregate expenses by the aggregate units. 1/

6. For the purpose of computing the cost scales the unit costs were further reduced to (a) a cost per 100 pounds for those expenses which are independent of the length of haul, and (b) a cost per 100 pounds per mile for those expenses variable with the length of haul. Such unit costs were computed separately for each size of net load appearing in the cost scales. For purposes of illustration the assembly of these unit costs for Territory No. 12, the United States, (box car and less-carload traffic) is shown in the Cost Scales, Tables 88 and 89.

The carload expenses treated as variable with the length of haul include expense groups I, II, and III. The carload expenses treated as independent of distance include expense groups IV, VI, and VIII. The less-carload expenses treated as variable with the length of haul include expense groups I, II, III, V, VII, and X. The less-carload expenses treated as independent of distance include expense groups IV, VI, VIII, and IX.

7. The less-carload operating deficits were computed by subtracting the less-carload revenues from the total of the less-carload station costs, line-haul costs, switching costs, and the payments to others for pick-up and delivery. The data were compiled by individual railroads.

The less-carload line-haul costs were determined by multiplying the gross ton-miles and car-miles produced in the transportation of less-carload traffic by the unit cost per gross ton-mile and per car-mile, respectively. The necessary data as to the average haul per ton originated and received from connections and the average net ton-miles per loaded car-mile were obtained from Senate Resolution 146, 76th Congress, First Session, Vol. 1, Statement 6. In computing the gross ton-miles it was assumed that less-carload traffic was handled in box cars having the same ratio of empty car-miles to loaded car-miles as obtained for all box car equipment.

Where a railroad was assigned to more than one territory, the system ton-miles and car-miles of less-carload traffic were apportioned to each territory upon the basis of the total tons

1/ See Cost Scales, Table 87.

handled in each territory 1/ (i.e., less-carload tons originated and received from connections). Where a railroad was assigned to more than one territory, the system less-carload operating deficit was apportioned to each territory on the basis of the carload operating expenses incurred in each territory. The effect of this was to treat the deficit as a burden on the system as a whole no matter where incurred. For example, if the system less-carload deficit amounted to five percent of the system carload operating expenses, the carload costs, including allowance for the less-carload deficit, were obtained by adding five percent to the carload expense in each territory.

The less-carload deficit computed as explained above does not include any allowance for a return on the value of the property used in the less-carload service. To provide for a return upon value each railroad's valuation was separated between freight and passenger and the freight portion again separated between carload and less-carload on the basis of the operating expenses. The justification for this basis of separation is that the operating expenses are roughly proportional to the units required in the performance of each service, i.e., gross ton-miles in running service, engine minutes in switching service, etc., and that such units constitute a measure of the use made by each service of the transportation facilities of the carrier. The results may be considered as approximate only. 2/

1/ As the average length of haul for less-carload traffic varies between territories this treatment may result in an overstatement or understatement of the territorial running expenses for the railroads involved. The error is eliminated in the larger territorial groupings (i.e., total of Western Territories) which avoid, except to an insignificant degree, the territorial separation of an individual carrier's operations.

2/ The point may be raised that under the existing less-carload and passenger rate structures the separation of the value of the property between freight and passenger and the further separation of the freight portion between carload and less-carload is more or less of academic interest only inasmuch as the passenger service and less-carload service fail to cover their full operating expenses, rents and taxes, to say nothing of providing for a return on the value of the property. On the other hand, the separation made herein does serve to provide an indication of the approximate level of the less-carload rates if this traffic were to earn a return.

8. The passenger operating deficits were computed by subtracting the passenger service revenues from the passenger service operating expenses. Where a railroad was assigned to more than one territory, the passenger operating deficit was apportioned to each territory on a basis similar to that explained above for the less-carload deficits.

9. The value of the road and equipment for each railroad was furnished by the Bureau of Valuation as of December 31, 1939. Where a railroad was assigned to more than one territory, the Bureau of Valuation furnished the value of the road (aggregate of accounts 1 to 47, inclusive) separated by territories. In such cases, the Bureau also furnished a separation of the system value of the equipment by individual accounts (accounts 51 to 58, inclusive). The allowance for general expenditures, accounts 71 to 77, inclusive, was distributed over the road and equipment accounts.

The Bureau of Statistics separated the value of the equipment between territories on the basis of appropriate factors. For example, the value of locomotives was first separated between road and yard on a tonnage basis, giving a weight of 1.2 to a ton of road engines and a weight of 1.0 to a ton of yard engines. 1/ The value of the yard locomotives was next separated between freight and passenger on the basis of the system yard locomotive-miles in each service. The value thus apportioned to the freight service was then separated between territories on the basis of the yard locomotive-miles. The same procedure was followed for the passenger portion of the value. The system value for road locomotives was separated between freight and passenger on the basis of the ton-miles of locomotives and tenders operated in each service. The freight portion was then distributed between territories on the basis of the ton-miles of locomotives and tenders in freight service. The passenger portion was separated between territories on the basis of the passenger locomotive-miles, the locomotive ton-miles not having been obtained from the carriers. The value of the freight-train cars was separated between territories on the basis of active car-days. The value of the passenger-train cars was separated between territories on the basis of the passenger-train car-miles. The value of floating equipment was separated between territories on the basis of the distribution of the maintenance and transportation expenses for such equipment.

1/ Weighting furnished by Engineering Section, Bureau of Valuation. Added weight given road locomotives based on special appliances used on road engines which are not found on yard engines.

10. The return on value was computed at both 4 percent and 5¾ percent. The figure of 4 percent was used in addition to the figure of 5¾ percent for the purpose of showing costs based on a rate of return which more nearly approximates that currently being earned by the railroads than does the figure of 5¾ percent. In 1939 the rate of return for all Class I railroads was 3.24 percent based on the recommended rate-making value furnished by the Bureau of Valuation for the purpose of the present cost study.

11. The expenses for the operation of grain elevators and storage warehouses plus the overhead expenses and the rate-making value apportionable thereto on an operating expense basis, were excluded from consideration in developing the cost scales. These items were included, however, in computing the rate of return currently earned by the carrier from all its services.

12. Cost scales were computed for the traffic moving in the following six types of freight cars:

Box,
Flat,
Stock,
Gondola and hopper,
Tank,
Refrigerator.

The differences in cost by types of railroad-owned equipment were occasioned, under the formula, solely by the differences in the tare weight and the return empty movement characterizing each type of equipment. 1/ However, in the case of tank cars and refrigerator cars, the railroads' freight-train car expenses (Groups I and VI) were eliminated and in lieu thereof was substituted the car hire of 1.5 cents per car-mile in the case of tank cars and 2.0 cents in the case of refrigerator cars. In 1939, only 5.6 percent of the tank cars and 15.1 percent of the refrigerator cars were railroad owned. 2/

The tare weights by classes of equipment were taken from the replies to a questionnaire issued to the carriers. A territorial average for each type of equipment was obtained by weighting the figure reported by each railroad with the total number of carloads the reporting railroad hauled of the traffic

1/ See Appendix B hereto for the territorial average tare weights and percent return empty of equipment.
2/ From Statistics of Railways in United States, 1939, pages 21 and 23.

customarily handled in each type of equipment. 1/ The tare weights for tank cars and refrigerator cars were based upon the average for railroad-owned equipment. As most of this equipment is privately owned, the average tare weight found for the United States was used in each territory for the purpose of computing the cost scales.

The same procedure was followed in obtaining the territorial weighted average ratio of empty car-miles to loaded car-miles by types of equipment.

Where a railroad's operations were assigned to more than one territory, the system average was used for each territory weighted in proportion to the percentage of the total cars that were originated or received from connections on the separate territories. No attempt was made to include in the figures for the Eastern Territory the tare weight or the percent return empty experienced in the operations of the Western Trunk Line railroads in northern Illinois. The inclusion of the latter operations with Eastern Territory would have a negligible effect on the average tare weight and percent return empty shown for the East.

While the figures shown in the cost scales are based upon the weighted average tare weights and weighted average ratios of empty car-miles to loaded car-miles by territories, one can compute a cost scale based on different tare weights or different ratios of empty to loaded car-miles by referring to the territorial unit costs (Cost Scales, Table 87) and following the procedure shown in the assembly schedule (Cost Scales, Tables 88 and 89.

13. The cost scales developed show only Cost Level II, i.e., the operating expenses, rents and taxes. Cost Levels III, IV, and V have been computed as a percentage of Cost Level II. Because of the expense, no attempt was made to set up scales for all the levels of cost. The figures for Cost Levels III, IV, and V are obtained by multiplying the figure shown in the Cost Scales by the appropriate factor (ratio) shown in the footnotes thereto. The loss and damage expense per 100 pounds applicable to the commodity under study should subsequently be added. This is found in Table No. 85. The loss and damage expense is the same for each level of cost.

The ratios used in computing Cost Levels III, IV(a), IV(b), V(a), and V(b) were mathematically derived as an integral

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1/ The commodity classes assumed to move in each type of car are set forth in Appendix C.

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part of the rail cost formula - Form A. On the other hand, Cost Level I, out-of-pocket cost, is based on certain assumptions which necessarily result in this level of cost being subject to some degree of approximation. For this reason the ratio by which Cost Level II should be multiplied to obtain Cost Level I has been omitted from the cost scales. See Chapter V for treatment of out-of-pocket costs.

Source of the data used in development of cost:

As previously indicated, most of the basic data used in applying the formula to those railroads assigned wholly to one territory were secured from the annual reports filed with the Commission for the year 1939. The following supplementary data not obtainable from the annual reports were secured from questionnaires sent to the carriers. The questionnaire issued under date of November 19, 1940, requested that the following data be furnished within two weeks:

(1) The car-miles for cars rented on a mileage basis,

(2) A separation of station employees, account 373, between platform labor and other employees (to be approximated if not actually known),

(3) An estimated percentage distribution (to nearest 10 percent) of nonrevenue freight net ton-miles by the classes of equipment shown:

Box cars,
Gondola and hopper cars,
Tank cars,
All other cars.

(4) Estimated average tare weight of cabooses,

(5) Estimated ratio of the empty car-miles to loaded car-miles, and the average tare weight for the following classes of equipment:

Box,
Flat,
Stock,
Gondola and hopper,
Tank and
Refrigerator.

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(6) Statement of the freight loss and damage expenses, separated between those groups of commodities reported to the Freight Claim Division of the Association of American Railroads.

(7) Estimated average weight of less-carload shipments (answers could be based on special study made for the Association of American Railroads for period of September 8 to 14, 1939).

Under date of November 23, 1940, an additional questionnaire was issued to those railroads whose operations were assigned to more than one territory, requesting by December 10 the separation of the carrier's statistics and operating expenses by territories. A third questionnaire sent to these same railroads under date of March 12, 1941, requested a territorial separation of certain passenger statistics.

Adjustments made because of the limitations of the source material:

For the purpose of expediting this study not only were time limits placed upon the return of the questionnaires, but the requests themselves were limited to data which would not require time consuming studies by the carriers. With but few exceptions, the railroads cooperated fully to the extent that the time permitted. Where the data received was at any substantial variance with the returns from other carriers having like operating conditions, inquiry was made of the carrier and the necessary correction made. Not all problems could be solved in this manner however. The procedure followed under various circumstances are set forth below.

Separation of carrier operating expenses and statistics by territories:

Four railroads, the Great Northern, The Atchison, Topeka and Santa Fe, The Chicago, Rock Island and Pacific, and the Missouri Pacific reported that they could furnish a territorial separation of their operating expenses and statistics as requested by the Bureau of Statistics with the exception of the count of the carloads and of the less-carload tonnage. This count was maintained by the carriers on a basis different from the usual division breakdown. Usually it is kept by states. For example, the Northern Pacific, while furnishing the requested separation of its operating expenses and statistics for its lines east and west of Mandan, North Dakota, 1/ was unable to separate its count of cars and tons except by states. Mandan is 175 miles east of the Montana-North Dakota State line which is the boundary between the Western Trunk Line

1/ Mandan is the nearest division point to the boundary between the Mountain Pacific and Western Trunk Line Territories that could be used for the purpose of the territorial separation of expenses and statistics.

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and Mountain Pacific Territories. To provide an approximate adjustment for this difference in the area represented by the operating expenses and that represented by the car count the following steps were taken. The percentage relation of the road mileage between Mandan and the state line to the total road mileage in North Dakota was computed (6.626 percent). This percent of the North Dakota carloads and less-carload tonnage was then deducted from the Western Trunk total and added to that for the Mountain Pacific Territory. The terminal costs (station and switching) were the only items affected as the line-haul traffic units, i.e., ton-miles and car-miles, were available on the basis desired. A similar procedure was followed with The Atchison, Topeka and Santa Fe, The Chicago, Rock Island and Pacific, and the Missouri Pacific.

In certain other cases the carriers' returns to the questionnaires, while providing a territorial separation of the carload and less-carload tons, failed to provide the supplementary data covering carloads and tons received and delivered in interchange. In such case the system total for carloads and less-carload tons received and delivered in interchange was separated between territories on the basis of the carloads and less-carload tons originated and terminated by territories. This adjustment was necessary in connection with the data provided by the Missouri Pacific, the St. Louis-San Francisco, the Great Northern, and the Northern Pacific.

The Atchison, Topeka and Santa Fe and the Northern Pacific did not provide a territorial separation of the car-miles for cars rented on a mileage basis. An arbitrary separation was made by the Bureau of Statistics based upon the total car-miles operated in each territory.

The Union Pacific Railroad reported that it did not currently separate its operating expenses by territories. This carrier was therefore requested to provide a separation of its statistics for the operations east and west of Cheyenne, Wyoming. 1/ Maintenance

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1/ The statistics for which a separation was requested were the following:

(1) Miles of track separated between
  First main track,
  Second main track,
  Branch lines, and
  Switching tracks,
(2) Locomotive-miles,
(3) Locomotive ton-miles,
(4) Train-miles,
(5) Train-hours,
(6) Yard switching engine-hours,
(7) Car-miles:
  Loaded,
  Empty, and
  Total
(8) Caboose-miles
(9) Gross ton-miles (cars, contents, and cabooses)

of way expenses were then separated on the basis of equated track-miles, observing the weighting developed by a committee of the American Railway Engineering Association. 1/. The system maintenance of equipment expenses were next separated for the lines east and west of Cheyenne on the basis of locomotive-miles or locomotive ton-miles, yard engine hours, or car-miles, as appropriate; yard expenses were separated on a yard engine-hour basis; locomotive crew expenses were separated on a locomotive-mile basis; train crew expenses were separated on a train-mile basis; and fuel expenses were separated on a gross ton-mile basis. After all separations were made, it was found that 39 percent of the aggregate expenses had been apportioned to lines east of Cheyenne and 61 percent to lines west of Cheyenne. The rail cost formula, Form A, was next applied to the system expenses of the Union Pacific, and the expenses by groups obtained as explained hereinabove. Thirty-nine percent of all the expenses and a like percent of all the service units were then apportioned to the Western Trunk Line Territory and the balance to the Mountain Pacific Territory. The result was an approximate separation of the Union Pacific expenses between the two territories, at the same time maintaining in each territory the system average unit costs. While this method would not reflect any differences in Union Pacific unit costs between the two territories, it nevertheless avoided the greater error of throwing the entire Union Pacific operations solely into one territory.

Comments on territorial separations:

With a few exceptions most of the territorial separations involved the railroads in the three Western territories. For this reason, among others, the costs were developed for the Western Territory as a whole thus eliminating or reducing to negligible proportions any errors resulting from the territorial separation of a carrier's operations. As pointed out in Chapter III, the differences between the costs found for the individual territories and those for the Western Territory as a whole are small.

Separation of station expenses (account 373) between platform labor and other employees:

The following carriers stated they were unable in the time allowed to provide a separation of account 373, station employees, between platform labor and other employees:

New England:
New York Connecting R. R.
Rutland R. R.

1/ See A.R.E.A., Volume 24 (1923), pages 1092-1093.

Eastern:
New York Central R. R.
Monongahela R. R.
Pittsburgh and Lake Erie R. R.
Pocahontas:
Chesapeake & Ohio Ry. Co.
Southwestern:
Atchison, Topeka and Santa Fe Ry.
St. Louis-San Francisco Ry. Co.
Western Trunk Line and Mountain Pacific:
Northern Pacific
Great Northern

In such instances the Bureau of Statistics estimated the platform expense by including in platform labor all the employees' compensation appearing in the annual report, schedule 561, divisions 88 to 92, and 94. The amount so derived was subtracted from the total of account 373 (freight), leaving a remainder which was designated as "other employees." Where the operations of any of the above railroads were assigned to more than one territory, the system expenses separated as above between "platform labor" and "other employees" were again separated between territories on the basis of the carrier's separation of the total of account 373.

Treatment of other errors arising from inadequate separation of station expense:

The separation made by some carriers, principally small railroads, between station platform labor and other employees resulted in costs per ton which were sharply at variance with the territorial average for the remaining carriers. The arbitrary rule was adopted that where the platform cost per ton, after an increase for transportation overheads 1/, was below $.40 or above $2.00 per ton, the territorial average cost computed for the remaining carriers in that territory would be applied to that road. Any increase or decrease in the cost was followed by an adjustment in the remaining station costs reported by the railroad. The total of the carrier's charges to account 373 remained unchanged. The railroads affected were as follows: 2/

1/ Includes station maintenance, station supplies and transportation overhead including superintendence, stationery, insurance, injuries, etc., accounts 371, 410-11, 414, 420.
2/ See Chapter VI hereto for the territorial average station platform costs per ton, labor only, computed from the study.

New England
Bangor & Aroostook R. R.
Central of Vermont Ry.
International Railway of Maine
Eastern
Delaware, Lackawanna & Western R. R.
Detroit & Mackinac Ry.
Lehigh Valley R. R.
Long Island R. R.
Montour R. R.
Pennsylvania-Reading Seashore Lines
Pittsburgh & West Virginia Ry.
Toledo, Peoria & Western R. R.
Wabash Railway
Western Maryland Ry.
Southern
Gulf & Ship Island R. R.
Mississippi Central R. R.
Northern Alabama Ry.
Southwestern
Burlington-Rock Island R. R.
Missouri & Arkansas Ry.
Oklahoma City-Ada-Atoka Ry.
St. Louis Southwestern Ry.
Texas Mexican Ry.
Mountain Pacific
Denver & Rio Grande Western R. R.
Spokane International Ry.

The less-carload platform cost data for the Chicago, Milwaukee, St. Paul and Pacific were similarly adjusted inasmuch as the costs shown only slightly exceeded the minimum set forth above and were substantially out of line with those of other railroads in the Western Trunk Line Territory. In the case of three railroads whose operations were assigned to more than one territory, the platform costs per ton, while within the range above indicated when treated on a system basis, appeared distorted when divided by territories. The costs were adjusted to apply a system cost per ton in each territory. The railroads for which this adjustment was made were the Illinois Central, the Chicago Great Western, and the Louisville and Nashville. In making all of the above adjustments, no change was made in the aggregate of a carrier's charges to account 373.

The following railroads show no platform costs in their returns to the Bureau of Statistics questionnaire nor any charges to schedule 561, divisions 88 to 92 and 94. The studies, therefore, include no platform expenses for these carriers:

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Louisiana, Arkansas and Texas
Missouri-Illinois R. R.
Monongahela Ry.
New York Connecting Railroad
Utah Ry.

See discussion in Chapter VI concerning the effect of the inadequacies in station expenses on the cost scales.

Pick-up and delivery payments:

Where a carrier performs its own pick-up and delivery service the expenses for equipment repairs, equipment depreciation and drivers' wages are charged to accounts 328, 331, and 411. As no segregation of the charges to these accounts was available, any expenses contained therein for pick-up and delivery are distributed over all traffic, carload and less-carload. The expenses involved however are negligible. The payments to others for pick-up and delivery service have been included in the study only for the purpose of computing the less-carload deficit and of comparing the less-carload out-of-pocket costs with the less-carload revenues. The less-carload cost scales therefore do not include any allowance for payments to others for pick-up and delivery.

Distribution of nonrevenue freight by classes of equipment:

A number of carriers were unable to provide the percentage distribution of their nonrevenue freight by classes of equipment. The purpose of such distribution was to permit of a more accurate computation of the tare ton-miles chargeable to the handling of nonrevenue freight than was obtainable by taking the ratio of the nonrevenue ton-miles to the revenue ton-miles. Where the carrier was unable to provide the desired percentage distribution, the average for five large representative roads in each territory was used. This procedure of using the data for five railroads made it possible to apply the cost formula to the railroads in question without waiting for all the returns for the territory to be received. This procedure was used for the following railroads:

New England Territory:
Canadian National Lines in New England
New York Connecting
Eastern Territory:
Pennsylvania Railroad
Long Island Railroad
Pennsylvania-Reading Seashore Lines
Monongahela Ry.

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Southwestern Territory:

Texas and New Orleans R. R.
Gulf Coast Lines

Western Trunk Line and Mountain Pacific Territories:

Great Northern Ry.
Union Pacific R. R.

Table 18 gives the territorial average percentage distribution of nonrevenue freight by classes of equipment which was applied to the above-named carriers:

Table 18. Percentage Distribution of Nonrevenue Freight by Classes of Equipment

Territory	Box	Gondola and hopper	Tank	All other	Total
New England	6.7	72.7	1.0	19.6	100.0
Eastern	11.8	87.0	0.8	0.4	100.0
Southern	13.2	69.0	9.1	8.7	100.0
Southwestern	17.5	48.8	20.7	13.0	100.0
Western Trunk Line	14.7	70.3	7.3	7.7	100.0
Mountain Pacific	23.5	50.5	13.6	12.4	100.0

Computation of tare weight of equipment for purpose of computing nonrevenue gross ton-miles:

Certain railroads failed to provide the average tare weight of their equipment. For the purpose of computing the tare ton-miles produced in the hauling of nonrevenue freight, the tare weight was based upon that computed for five large representative roads in each territory. The explanation should here be made that for the purpose of computing the territorial average tare weight used in the development of the cost scales, the data for all reporting railroads in the territory were used. The railroads failing to report the tare weight of the equipment were as follows:

New England Territory:

Canadian National Lines in New England
New York Connecting R. R.

Eastern Territory:

Montour R. R.
Monongahela Ry.
Staten Island Rapid Transit

Southern Territory:
Georgia & Florida R. R.
Western Trunk Line:
Minneapolis and St. Louis R. R.
Duluth South Shore and Atlantic Ry.
Southwestern:
Gulf Coast Lines

Development of the ratio of empty to loaded car-miles:

A number of railroads stated they were unable in the time provided to furnish any estimate as to the ratio of the empty car-miles to loaded car-miles by classes of equipment. For the purpose of computing the nonrevenue gross ton-miles incurred in the movement of nonrevenue freight, a factor was applied to each railroad based upon a simple average of that for five large representative roads in the same territory. Any error involved in this procedure would insignificantly affect the cost study. For the purpose of computing the ratio of empty car-miles to loaded car-miles for use in the cost scales, a weighted average was used for all reporting carriers in each territory. The railroads failing to furnish the ratio of empty to loaded car-miles by classes of equipment were as follows:

New England Territory:
Canadian National Lines in New England
Rutland R. R.
Eastern Territory:
Monongahela Ry.
New York Central R. R.
Pittsburgh & Lake Erie R. R.
Southwestern:
Gulf Coast Lines
Western Trunk Line and Mountain Pacific:
Minneapolis & St. Louis R. R.
Northern Pacific Ry.
Minneapolis, St. Paul and Sault Ste. Marie Ry.
Chicago Great Western Ry.
Great Northern Ry.
Duluth, South Shore and Atlantic Ry.

Separation of loss and damage expenses by commodity groups:

The railroads listed below failed to provide a separation of loss and damage expenses by commodity groups. In such case their aggregate payments for loss and damage were distributed among the

commodity groups in the proportion that the payments for all other reporting roads in the territory were distributed. The amounts involved were negligible.

Missouri-Illinois Railroad
Midland Valley R. R.
Canadian Pacific Lines in Vermont
International Railway of Maine

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CHAPTER V

Computation of the Out-of-Pocket Costs

Description and analysis:

The out-of-pocket costs are those costs which would be added because of an increase in traffic or which would be eliminated because of a decrease in traffic. They are those expenses which are directly affected by use. By observing the effect of changes in the volume of the traffic on the expenses a measure of the out-of-pocket expenses can be obtained.

The percentage of the expenses affected by use may vary with the following factors, among other; first, the degree to which respondent's transportation facilities, or that portion of the facilities under study, i.e., running tracks, trains-(scheduled speed considered), terminals, etc., are being operated at or near capacity; and secondly, the relative permanence of the assumed change in the volume of the traffic, i.e., whether of a short-term or of a long-term nature. The effect of these factors may vary not only between carriers but from period to period for an individual carrier. Under some circumstances added traffic may be handled without a proportionate increase in train-miles. Under other circumstances, the added traffic may occasion an increase in the train-miles which is relatively as great as the increase in traffic. Under certain circumstances added traffic may be handled without significantly affecting the investment, while under other circumstances it may occasion added investment.

The reason for the variation in the expences is that as the traffic increases by small increments it is continuously taxing the capacity of the existing railroad staff or facilities to handle it. Yard crews, yard clerks, station clerks, platform labor, train crews, engine crews, dispatchers, shop forces, enginehouse forces, rolling equipment, etc., are constantly added to meet the demands of increased traffic, and then reduced or withdrawn as the demand falls away. An analysis of the rise and fall of railroad traffic both on a seasonal and on an annual basis indicates that this process of change is ever present. Some items of expense, such as locomotive fuel, trainmen, enginemen and yard crews show a relatively high degree of response to changes in the volume of traffic. Other items such as superintendence, dispatching, station expenses, enginehouse expenses, and traffic and general expenses will increase and decrease in some measure as the traffic volume changes but the adjustment to the change in traffic is irregular. This is occasioned in part by the lag that may exist between the time the change in the volume of traffic occurs and the period when management can effect an adjustment of the expenses; and in part

by the fact that any given size of staff can handle changes in traffic volume within a limited range, and as long as that range is not exceeded the expenses remain unaffected. When the change in the volume of the traffic exceeds the limits of this range, the expenses may rise or fall abruptly. A study of the expenses for Class I carriers incurred during various years and for periods of different traffic volume indicate that there are relatively few expenses which are not influenced in some degree by an increase or decrease in the traffic. The estimated degree to which each expense item is affected is shown in Table 19. The figures are based on the sources of information or assumptions there indicated.

The above discussion has dealt with the mass effect of increases or decreases in the traffic volume upon a carrier's expenses. Question may arise as to the out-of-pocket cost for handling a single additional carload. From the discussion that follows the conclusion is reached that on the average it is no different from that for mass changes in traffic volume.

Traffic conditions are never static on a railroad, the traffic volume being in a continuous state of flux. Furthermore, the changes in volume from month to month and year to year are seldom so limited in their range that the expenses remain unaffected. This condition being true, the effect of one added unit of traffic is no different from that of any other added unit. For example, if the receipt of 10 added tons of less-carload traffic occasions the employment of one added station platform trucker, one cannot place any more responsibility for this increased expense upon the tenth ton than upon the first ton. Each ton contributes equally in increasing the work up to that point which necessitated the additional employee. Furthermore, the fact that any one of the ten added tons might have been moving at rates based upon out-of-pocket costs would have no bearing on the need for the additional platform trucker. Similarly, if the receipt of ten added carloads requiring industry switching required the assignment of an additional yard engine crew, each one of these ten carloads is equally responsible for building up the work to a point where such added crew was necessary. Again, the fact that one of the ten added carloads might have been moving at rates based on out-of-pocket costs would have no bearing upon the need for the additional yard crew. The responsibility for the change in the expenses must be shared equally by each increment of traffic that contributed to the increase or decrease in the expenses.

Assumptions made in computing out-of-pocket costs:

The percentage of the expenses set forth below as affected by use represents neither the lowest nor the highest out-of-pocket costs which might obtain under various possible combinations of circumstances.1/ They are based on the following assumptions:

(a) That, for the purpose of computing the maintenance of way expenses, the traffic under study moves over routes of average traffic density. (The percentage of expenses affected by use on branch lines will normally be lower than that for main lines which enjoy a heavier traffic density.)

(b) That, for the purpose of computing the maintenance of equipment expenses, the investment in locomotive equipment and freight-train cars, and the rental of such equipment, will adjust itself, with some lag, to the volume of traffic handled by respondent,2/ and

(c) That the yard engine hours and the train-miles are directly proportional to changes in the volume of traffic.

1/ See appendix D.

2/ Maintenance of equipment expenditures fluctuate widely. In times of relative prosperity the needs of the traffic require that the equipment awaiting repairs be reduced to a minimum. As traffic drops off the need for equipment correspondingly declines and under the pressure of declining revenues the cars and locomotives needing repairs may be stored rather than sent to the shops. This procedure may continue temporarily until the supply of serviceable equipment is reduced to the current needs of traffic. A new but lower level of shop expenditures is then reached which is in tune with the then-existing flow of traffic. When traffic is declining the carrier may be temporarily living on its "fat," i.e., on the excess of serviceable equipment above current needs. When traffic picks up and unserviceable equipment is taken out of storage for repairs the process is reversed with a temporary added financial burden to the carrier. A like situation exists as to the ownership of equipment. As traffic declines purchases fall off and as traffic picks up purchases increase. Although this adjustment of ownership to traffic needs is very irregular and subject to much lag, particularly when traffic is declining, and although the long time trend is influenced by the continuous drive toward more effective utilization of equipment, nevertheless there exists the basic tendency for management to adjust its ownership of equipment to its traffic needs (allowance for reserves included).

Procedure in computing out-of-pocket expenses:

The percentage of the costs which may be considered as out-of-pocket under the above assumptions was computed for carload and less-carload traffic for various lengths of haul by applying the rail cost formula used in this study, Form A, first, to the full costs, and secondly, to the out-of-pocket portion of the aggregate expenses for all Class I railroads treated as a group.1/ The procedure of applying the formula to each railroad individually as was done in computing the cost scales was not followed in this case.

For purposes herein, the portion of the charges to each account treated as the out-of-pocket expense is as shown in Table 19.

1/ The source of the data (1939) was as follows:
Operating expenses from Preliminary Abstract of Statistics of Railways, Summary No. 4 (1939). Data as to locomotive-miles, ton-miles, car-miles and train-miles from Text of the 53rd Annual Report on the Statistics of Railways in the United States (1939), Table 158, pages 166-168, and questionnaires issued in connection with this study. Rents, taxes, and car hire taken from 53rd Annual Report on the Statistics of Railways in the United States (1939), Table 107, page 93; Table 113-A, page 99; and table 115, page 101. Less-carload data concerning estimated average weight of less-carload shipments, average net ton-miles per loaded car-mile, average haul per ton, obtained from returns to questionnaires and material appearing in Senate Resolution 146, 76th Congress, 1st Session, Volume I, Statement 6.

Table 19.--Portion of the Expenses Treated as Out-of-Pocket

Maintenance of Way and Structures

Acct. No.	Expense groups or items	Out-of-pocket portion (percent)	Source
201	Superintendence	20	1/
202-22	Track expense - yard switching tracks	2/	
	- way switching tracks	2/	
	- running tracks	2/	
227-28	Station & office bldgs. (a)-Station bldgs.	20	3/
	(b)-Grain elevators	5	3/
	(c)-Genl. ofc. bldgs.	10	3/
229-30	Roadway buildings	0	1/
(231-32	Water stations	10	1/
(233-34	Fuel stations	15	1/
235-36	Shops and enginehouses	10	1/
237-38	Grain elevators	5	3/
239-40	Storage warehouses	5	3/
241-42	Wharves and docks	10	1/
243-44	Coal and ore wharves	10	1/
247-48	Telegraph and telephone lines	0	1/
249-50	Signals and interlockers	30	1/
253-54	Power plants	0	1/
257-58	Power - transmission systems	0	1/
265-66	Miscellaneous structures	0	1/
269-73	Roadway machines, small tools and supplies, removing snow, ice, and sand, public improvements - maintenance	20	3/
(274	Injuries to persons	50	1/
(275	Insurance	50	5/
(276	Stationery and printing	10	1/
(277	Other expenses	0	1/
278	Maintaining joint tracks, yards, etc.-Debit	4/	
279	Maintaining joint tracks, yards, etc.-Credit	4/	
281	Right-of-way expense	0	5/

See following page for footnotes.

Footnotes for preceding page.

1/ See report of American Railway Engineering Association committee, A.R.E.A. Manual, 1929, page 1406.

2/ Compute the aggregate out-of-pocket expenses for yard switching tracks, way switching tracks, and running tracks, respectively, by taking the following percentages of each individual account.

Acct. No.	Expense groups or items	Out-of-pocket portion (percent)			Source
		Yard switching tracks	Way switching tracks	Running tracks	
202	Roadway maintenance	10	10	10	3/
204	Underground power tubes	0	0	0	1/
206	Tunnels and subways	10	10	10	1/
208	Bridges, trestles, and culverts	10	10	10	3/
210	Elevated structures	10	10	10	3/
212	Ties	55	70	80	3/
214	Rails	95	100	100	3/
216	Other track materials	90	100	100	3/
218	Ballast	80	80	80	3/
220	Track laying and surfacing	93	93	93	3/
221	Fences, snowsheds, and signs ...	0	0	0	1/

3/ Based on study by Engineering Section, Bureau of Valuation.

4/ Apply the percentage developed for the aggregate of accounts 202-273, inclusive.

5/ Percentage based on estimate.

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Table 19.--Portion of the Expenses Treated as Out-of-Pocket

Continued

Maintenance of Equipment and Equipment Rentals

Acct. No.	Item	Out-of-pocket portion (percent)	Source
301	Superintendence	10	1/
302-03	Shop machinery	40	1/
304-05	Power plant machinery	5	1/
308	Steam locomotives, repairs	100	2/
311	Other locomotives, repairs	100	2/
314	Freight-train cars, repairs	100	2/
323	Floating equipment, repairs	10	1/
326	Work equipment, repairs	75	3/
328	Miscellaneous equipment, repairs	0	1/
329-30	Equipment retirements:		
	(a) Steam locomotives	100	2/
	(b) Other locomotives	100	2/
	(c) Freight-train cars	100	2/
	(d) Work equipment	25	3/
	(e) Floating equipment	0	1/
331	Equipment depreciation:		
	(a) Steam locomotives	100	2/
	(b) Other locomotives	100	2/
	(c) Freight-train cars	100	2/
	(d) Work equipment	25	3/
	(e) Floating equipment	0	1/
329-31	Equipment retirements and depreciation, miscellaneous equipment	0	1/
332	Injuries to persons	50	1/
333	Insurance	50	4/
334	Stationery and printing	10	1/
335	Other expenses	0	1/
336	Maintenance of joint equipment,-Dr.	100	2/
337	Maintenance of joint equipment,-Cr.	100	2/
235-36	Shops and enginehouses	10	1/
253-54	Power plants	0	1/
257-58	Power transmission systems	0	1/
503,536	Hire of freight cars	100	2/
504,537	Locomotive rent, net	100	2/
506	Rent from floating equipment	50	4/
539	Rent for floating equipment	50	4/
507	Rent from work equipment	10	3/
540	Rent for work equipment	10	3/

1/ See report of American Railway Engineering Association committee, A.R.E.A. Manual, 1929, page 1408.
2/ See assumptions set forth herein above.
3/ Based on study by Engineering Section, Bureau of Valuation.
4/ Percentage based on estimate.

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Table 19.—Portion of the Expenses Treated as Out-of-Pocket

Continued

Transportation Expenses

Acct. No.	Expense groups or items	Out-of-pocket portion (percent)	Source
371	Superintendence	50	1/
372	Dispatching trains	50	1/
373	Station employees (a) - Platform labor	90	2/
	(b) - Other employees	33	2/
374	Weighing, inspection, and demurrage bureaus	0	3/
375	Coal and ore wharves	20	3/
376	Station supplies and expenses	4/	
(377-391,) (excl. 388)	Yard expenses, excl. enginehouse expenses	100	1/ 5/
388	Enginehouse expenses - yard	75	1/
(392-402,) (excl. 400)	Train expenses, excl. enginehouse expenses	100	5/
400	Enginehouse expenses - train	75	1/
404	Signals and interlockers	33	1/
405	Crossing protection	20	3/
406	Drawbridge operation	0	3/
407	Telegraph and telephone operation	20	3/
408	Operating floating equipment	50	3/
410	Stationery and printing	20	3/
411	Other expenses	20	3/
412	Operating joint tracks and facilities--Dr.	50	3/
413	Operating joint tracks and facilities--Cr.	50	3/
414	Insurance	50	3/
415-20	Loss and damage, etc., clearing wrecks	100	3/

1/ See data and references in appendix D.

2/ Based on (a) the assumption that station expenses, Account 373, are 50 percent variable with changes in traffic volume (see Appendix D hereto), and (b) an estimate that the platform labor portion of the expenses are 90 percent variable. With approximately one-third of the charges to Account 373 constituting "platform labor", it follows that the portion of the expenses for "other employees" which are variable with traffic is about one-third.

3/ Percentage based on estimate.

4/ Apply the percentage developed for the aggregate of account 373 ((a) plus (b)).

5/ See assumptions set forth herein above.

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Table 19.—Portion of the Expenses Treated as Out-of-Pocket

Continued

Traffic, General, Miscellaneous Overheads and Taxes

Expense groups or other items	Out-of-pocket portion (percent)	Source
Miscellaneous operations	20	1/
Traffic	20	2/
General	50	2/
Joint facility rents (Accts. 508 and 541 - Net)	0	1/
Rent of buildings and other property (Account 142 - Credit)	0	1/
Payroll taxes	3/	
All other taxes - freight portion	4/	

1/ Percentage based on estimate.
2/ See data and references in appendix D.
3/ Computed by multiplying the freight portion of the payroll taxes by the ratio of the out-of-pocket expenses, excluding equipment depreciation, to the total operating expenses, excluding equipment depreciation.
4/ Includes Federal income taxes and freight portion of Federal telephone and telegraph, gas and oil, and electrical energy taxes.

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Out-of-pocket portion of the aggregate carload and less-carload expenses:

The results of the study made by applying the formula first to the full costs and secondly to the out-of-pocket costs are shown in Table 20.

Table 20. Comparison of Carload and Less-Carload Out-of-Pocket Costs, Cost Level I, with Total Operating Expenses, Rents and Taxes, Cost Level II 1/

Expense item (1)	Out-of-pocket costs Cost Level I (2)	Operating expenses, rents and taxes, Cost Level II (3)	Ratio of out-of-pocket costs to total operating expenses, rents and taxes (4)
Carload operating expenses, rents and taxes	$1,534,628,295	$2,145,183,774 2/	73.8%
Less-carload cost including running, switching and station expenses but excluding payments to others for pick-up and delivery	206,203,985	302,351,309	68.3%

As indicated in the above table, the out-of-pocket portion of the carload operating expenses, rents and taxes constitutes, under the assumptions set forth hereinabove, 73.8 percent of the total of such expenses. The comparable percentage for the less-carload traffic is 68.3 percent. The lower percentage for the less-carload traffic is attributable to the relatively small portion of the station expenses, other than platform labor, assumed to be variable with changes in traffic volume (33 percent). This expense constitutes a higher portion of the total expenses in the case of less-carload traffic than it does in the case of carload traffic.

1/ Excludes payments to others for pick-up and delivery.
2/ This figure differs by 0.39 percent from the total of $2,153,476,121 appearing in the Cost Scales, Table 87, column 42. The latter figure was obtained by applying the formula to each railroad individually.

The percentage that the out-of-pocket cost constitutes of the full cost will vary according to the length of haul and the net weight of the shipment. Table 21 shows the relationship of the carload out-of-pocket costs to the full costs for various lengths of haul and net loads based on traffic moving in box cars.

Table 21

Percent That the Carload Out-of-Pocket Costs (Cost Level I) Constitute of the Carload Operating Expenses, Rents and Taxes (Cost Level II)

Miles	5 Tons	25 Tons	50 Tons
0	69.5	69.6	69.5
50	70.6	70.6	70.4
100	71.7	71.4	71.4
200	72.7	72.4	72.5
300	73.1	73.0	73.1
500	73.9	73.6	73.5
1,000	74.8	74.3	73.6
1,500	75.1	74.3	73.9
3,000	75.4	74.6	74.1

The comparable data for less-carload traffic based upon a net load of 5 tons per car are shown in Table 22.

Table 22.

Percent that the Less-Carload Out-of-Pocket Costs (Cost Level I) Constitute of the Less-Carload Operating Expenses.

Miles	5 Tons
0	56.5
50	58.9
100	60.8
200	63.6
300	65.5
500	68.0 1/
1,000	71.0
1,500	72.4
3,000	74.0

1/ The average haul per less-carload ton originated is 515 miles. Senate Resolution 146, 76th Congress First Session, Statement No. 6, page 15. Based on test study during week ended October 7, 1939.

Analysis of results:

The data set forth above indicate that the out-of-pocket portions of the carload and less-carload operating expenses are 73.8 percent and 68.3 percent of the total operating expenses, rents and taxes. Certain factors not provided for which will tend to either lower or increase these percentages are discussed herewith.

Data appearing in Appendix D indicate that the variable portion of the yard and train expenses (including branch lines operations) is under the figure of 100 percent which was assumed in this study. This has been true particularly where the traffic has been on the increase. However, a measure of the cost of handling added traffic is what the carrier can save if the traffic were eliminated. The experience of 1938 indicates that a given reduction in the traffic volume (measured in gross ton-miles) was followed by an almost equal reduction in the yard and train expenses. The experience during periods of both increasing and decreasing volume must be considered.

The out-of-pocket study does not include any allowances for sales taxes, gross receipts taxes, or other forms of taxes which are affected by changes in the volume of traffic. No data were currently available on this subject. The figures also make no allowance for any return upon the value of the rolling equipment, the investment in which is assumed to be variable, with some lag, with the volume of traffic. If an allowance were included in the out-of-pocket costs for a four percent return upon the value of freight train cars, the carload figure for out-of-pocket costs would be increased from 73.8 to 76.4 percent and less-carload figure from 68.3 to 70.6 percent. 1/ A corresponding allowance for a return on the value of the motive power would increase the figures again by something over one percentage point. No consideration has been given to the effect of added traffic on the investment in road.

The less-carload station expenses do not include any platform work done by train crews, nor was any separation made of the pick-up and delivery work performed by the carriers for themselves. 2/

1/ Based upon a recommended rate-making value for freight-train cars of $1,540,200,000 for railroads included in the cost study. Values are as of December 31, 1939. Excludes freight cars privately owned. Separation of value between carload and less-carload traffic based on active car days in each service.

2/ The carrier's repair and depreciation expenses for pick-up and delivery vehicles are charged to Accounts 328 and 331. The expense for drivers is charged to Account 411. All charges to these accounts were treated as overheads and distributed over all traffic. The increases involved are small.

It is obvious that any single factor used to reflect the percentage which the out-of-pocket costs constitute of the total operating expenses, rents and taxes is necessarily an approximation. It may represent neither the highest nor the lowest out-of-pocket cost that may obtain under various combinations of circumstances. However, based on the data and assumptions set forth herein, it appears to be reasonable to assume for the purpose of this study that 80 percent of the total operating expenses, rents and taxes assigned and apportioned to the carload and less-carload traffic will cover the out-of-pocket expense of handling such traffic.

CHAPTER VI

Analysis of the Effect of Certain Procedures and Factors Used in the Computation of Territorial Costs

Purpose of this chapter:

In order to expedite this study certain steps were necessary, such as limiting the requests made on the carriers for information to that which was immediately available or which could be compiled within a very short time; the exclusion of the Class II and Class III railroads and the switching and terminal companies; and the development of factors for distributing switching and other expenses from data introduced in the record in various other proceedings before the Commission. To have done otherwise would have resulted not only in extended delays but would have occasioned heavy expense to both the Commission and the carriers. The purpose of this chapter is to provide some information as to the probable errors that may have resulted from this program.

Exclusion of Class II and Class III railroads:

Class II and Class III railroads were omitted from the cost study because their system of accounts did not lend itself to an application of the formula used herein, and also because it was not felt that the inclusion of their expenses in the territorial averages would significantly affect the results. The expenses of the Class II and Class III railroads for 1939 amounted to less than 2 percent of that for the Class I carriers. 1/

The point may be raised that some of the freight traffic of the Class I carriers is given a switching movement by connecting Class II and Class III railways. If the work performed by each of these groups for the other is equal, and if the cost of the service is equal in each case, the cost study will not be affected. On the other hand, if the cost of the work done by each group for the other is not equal, the costs developed in the study for the Class I railroads will be affected to some very small degree. The following figures provide some information on the subject. The switching and station expenses constitute approximately one-third of the total freight operating expenses, rents and taxes of the Class I railroads, or approximately $850,000,000. The operating expenses for the Class II and Class III railroads approximate $41,000,000 (Statistics of Railways, 1939, Tables 159 and 160). Assuming

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1/ Statistics of Railways in the United States, 1939, Table 156.

that the switching and station expenses for the latter also constitute one-third of their total cost, such expense would approximate $14,000,000. This figure constitutes between 1 and 2 percent of the comparable expenses of the Class I railroads. Inasmuch as any error would only result from the fact that Class II or Class III railroads handled more or fewer cars for Class I railroads than Class I railroads handled for them, or from differences in the cost per car switched, the aggregate error would amount to but a small fraction of the figure of 1 or 2 percent developed above. From the foregoing, it is believed that the effect of the exclusion of the Class II and Class III carriers from the cost study would not significantly affect the territorial cost scales.

Exclusion of the switching and terminal companies:

The cost study does not include the switching and terminal companies, although some of these carriers provide switching service for the Class I railways (line-haul carriers). The inclusion of these companies would have required special studies including the territorial separation of the work done at such points as Chicago and St. Louis. The three methods of settlement between the line-haul carriers and switching carriers for switching services are as follows:

(1) Through charges to the joint facility accounts of the Class I line-haul carriers where a joint facility operation exists.

(2) Through direct payments by the line-haul carrier of the switching charges of the switching and terminal companies. Such payments are a charge against the freight revenues of the Class I line-haul carrier and thus do not appear in its statement of operating expenses.

(3) Through a division of the freight revenues.

Any expenses incurred through the operation of the joint facility accounts, i.e., (1) above, will be reflected in this cost study. Charges incurred through items (2) and (3) above are not picked up in this study and to that degree the study contains an understatement of the expenses. An approximation of the amount of the error may be obtained by comparing the total freight operating expenses, rents and taxes of the Class I switching and terminal companies 1/ for 1939 with that for Class I line-haul companies. The total for the Class I switching and terminal companies was $42,297,067 2/ or 1.68 percent of the total freight

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1/ The freight operating expenses for the Class II and Class III switching and terminal companies are not available. Their total expenses amounted to 0.65 percent of the total operating expenses for all railway companies. Text of the Statistics of Railways in the United States, 1939, Table 156.

2/ Preliminary Abstract of Statistics of Railways, 1939, Summary No. 5.

operating expenses, rents and taxes of the Class I (line-haul) railways of $2,511,981,244. 1/ These figures are after allowing for the joint facility debits and credits. The figure of 1.68 percent overstates the error in some degree as no allowance is made for the intraterminal or interterminal switching done by these Class I switching and terminal companies for their own account or the switching done for the account of Class II and Class III carriers.

The effect of the understatement is greater on the short hauls as the switching expenses here constitute a greater part of the total cost than on the long hauls. To provide a test in this matter, the entire expense of $42,297,067 for the Class I switching and terminal companies was added to the costs developed for the United States. The station costs were included with expense groups VIII, IX, and X in the proportion obtaining for all Class I line-haul companies. The remaining expenses were added to the switching costs and distributed between all classes of switching in the proportions obtaining for the switching expense for the Class I companies. Table 23 provides a comparison of the costs both including and excluding the switching and terminal companies.

1/ Statistics of Railways in the United States, 1939, Table 113-A.

Table 23. Comparison of Cost Scales Including and Excluding Switching and terminal companies 1/

Haul in miles (1)	Carload traffic: 5 tons: Sw. & term. rys. incl. (2)	5 tons: Sw. & term. rys. excl. (3)	25 tons: Sw. & term. rys. incl. (4)	25 tons: Sw. & term. rys. excl. (5)	50 tons: Sw. & term. rys. incl. (6)	50 tons: Sw. & term. rys. excl. (7)	Less-carload: 5 tons: Sw. & term. rys. incl. (8)	5 tons: Sw. & term. rys. excl. (9)
Terminal 2/ ...	20.1	19.2	4.0	3.8	2.0	1.9	41.7	40.4
50	24.7	23.8	5.2	5.1	2.8	2.7	47.6	46.2
100	29.3	28.3	6.5	6.3	3.6	3.5	53.5	52.1
200	38.5	37.4	8.9	8.7	5.2	5.1	65.4	63.7
300	47.7	46.5	11.3	11.1	6.8	6.7	77.2	75.4
500	66.1	64.7	16.2	15.9	10.0	9.8	100.9	98.7
1,000	112.0	110.1	28.4	28.0	18.0	17.8	160.2	157.0
1,500	158.0	155.6	40.6	40.1	25.9	25.7	219.4	215.2
3,000	295.8	291.9	77.2	76.4	49.8	49.4	397.2	390.0

The exclusion of the expenses for the switching and terminal companies affects the cost by 9 mills or 3.8 percent for a carload movement of 5 tons on a haul of 50 miles. On a 25-ton carload the difference ranges from 1 mill or 2 percent on a 50-mile haul to 8 mills or 1 percent on a haul of 3,000 miles. On a 5-ton load of less-carload traffic the effect is 1.4 mills or 3.0 percent on a 50-mile haul and 7.2 cents or 1.8 percent on a 3,000-mile haul.

Exclusion of the count of cars given an intraterminal or interterminal switching from the total count of cars switched:

The cars given an intraterminal or interterminal switching movement 3/ are not reported by the carriers and hence the total number of cars switched will be somewhat greater than the number used in the

1/ The costs shown in columns (3), (5), (7) and (9) differ somewhat from the costs shown for movement in box cars appearing in the Cost Scales, for the United States, Territory No. 12. The reason is that the cost scales were based upon the application of the cost formula, Form A, to each individual railroad, while for the purpose of Table 23 the formula was applied to the aggregate expenses and statistics for all Class I railroads. The sources for the latter are listed in Chapter V, page 72, footnote 1. This procedure is sufficiently accurate for the purpose of the comparisons here being made.

2/ Terminal cost only, exclusive of any line-haul.

3/ See Appendix E for definitions of switching.

computation of costs in this study. Little information is currently available on the subject but it is believed that the number of cars so handled is relatively small, possibly constituting between one and five percent of the total of the cars originated and the cars terminated by the individual carriers. With the switching and station costs constituting about one-third of the total costs for Class I carriers and assuming that the cars given intraterminal or interterminal switching constitute three percent of the total number of cars originated or terminated, the overstatement in costs would approximate one percent on the average length haul. Such overstatement is offset in some degree by the understatement of the costs arising from the exclusion of the expenses for the switching and terminal companies dealt with in the preceding paragraph.

Effect of an adjustment in the ratio of empty to loaded car-miles:

As previously stated, the territorial figures used for the ratio of the empty car-miles to loaded car-miles are based upon the weighted average of the carriers' returns. As the territorial averages developed are relatively uniform at least insofar as box, gondola and hopper and tank cars are concerned, there is reason to believe that these ratios are reasonably correct. 1/ Computations have been made, however, to indicate the effect on the cost of a change in the ratio of five percentage points. The ratio used in the Southern Territory was .294. Table 24 compares the costs for a 25-ton load in box cars based on the figure of .294 and .344, respectively. The cost for any other ratio can be determined by following the procedure outlined in the cost scales, Tables 88 and 89.

Table 24. Effect on Cost of a Change of Five Percentage Points in the Percent Return Empty of Equipment

Haul in miles (1)	Cost in cents per 100 lbs. for 29.4 percent empty return of equipment (2)	Cost in cents per 100 lbs. for 34.4 percent empty return of equipment (3)	Percent difference (4)
Terminal ..	3.2¢	3.2¢	0.0
100	5.6¢	5.7¢	1.8
300	10.4¢	10.6¢	1.9
1,500	39.0¢	39.9¢	2.3

1/ See Appendix B hereto for ratios.

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At 300 miles the increase of five percentage points affects the cost by 1.9 percent. The effect at 1,500 miles is 2.3 percent.

Effect on cost of a change in the tare weight:

The territorial tare weights used in the study constitute a weighted average of the carriers' returns. It is reasonable to assume that the data reported are approximately correct as the figures were readily available to each railroad. Computations have been made, however, to indicate the effect on cost of a change of five percent in the tare weights. The average tare weight for box cars developed for the Southern Territory was 22.4 tons. Table 25 shows costs for a 25-ton load moving in box cars having tare weights of 22.4 and 23.5 tons, respectively.

Table 25. Effect on Cost of a Change of Five Percent in the Tare Weight of the Equipment

Haul in miles (1)	Costs per 100 lbs. based upon territorial average tare weight per box car of 22.4 tons (2)	Cost per 100 lbs. based upon assumed tare weight of 23.5 tons (3)	Percent difference (4)
Terminal ..	3.2¢	3.2¢	0.0
100	5.6¢	5.7¢	1.8
300	10.4¢	10.5¢	1.0
1,500	39.0¢	39.7¢	1.8

The variations occasioned by a five-percent change in the tare weights are negligible, amounting to 1.0 percent at 300 miles. The decrease in the percent of change between 100 miles and 300 miles is occasioned by the failure to carry out the figures to more than two places.

Effect of an error in the weighting factors for the several classes of switching:

The switching expenses were apportioned between the various classes of switching on an equated carload basis. The equating factors used were developed from information introduced before the Commission in a number of switching studies but principally those listed in Appendix A hereto. Although it is believed that they represent a reasonable approximation of the relative switch engine time required for the

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several classes of switching, question may arise as to the effect of a given change in the factors. Such change, while increasing or decreasing the switching cost for any one class of switching relative to the remaining classes, will leave the total switching costs unchanged.

As the costs for interchange and for intertrain and intratrain switching are distributed on a revenue car-mile basis (i.e., treated as variable with the length of haul) any adjustment between these classes of switching which left their combined weighting unchanged would not affect the cost study. The cost is only affected when the weighting giving those classes of switching treated as variable with distance is changed relative to the weighting given to those classes of switching treated as independent of distance. Even then the effect would be nil at any distance approximating the territorial average length of haul as errors in the separation between the line-haul and terminal expenses then cancel themselves out. A comparison of the weighting used in the study with that used for test purposes herein follows: 1/

Class of switching (1)	Weighting used in cost study 1/ (2)	Weighting used for test purposes (3)
1. Carrier terminal switching, and connection terminal switching, industry and team tracks	1.00	1.00
2. Carrier terminal switching, freighthouse	.80	.80
3. Interchange switching	.45	.50
4. Intertrain and intratrain switching	.25	.30

The effect on cost of changing the relative weighting by five percentage points is shown in Table 26 for net loads of 10, 25 and 50 tons moving in box cars. The results were obtained by reapplying the cost formula to the cost data of a large class I carrier using the adjusted weighting. The costs are in cents per 100 pounds and include operating expenses, rents and taxes.

1/ Weighting applies to the switching movement of a car in the loaded direction only. See Appendix A.

Table 26. Comparison of the Carload Costs in Cents Per 100 Pounds - (Box Cars). Costs Based on a Change of Five Percentage Points in the Weighting Given Interchange and Intertrain and Intratrain Switching

Haul in miles	Net load of 10 tons		Net load of 25 tons		Net load of 50 tons	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
10	9.8	9.5	4.0	3.8	2.0	2.0
50	11.9	11.6	5.0	4.8	2.7	2.6
100	14.4	14.1	6.2	6.1	3.5	3.4
200	19.5	19.3	8.7	8.6	5.1	5.0
300	24.6	24.5	11.2	11.1	6.7	6.6
500	34.8	34.8	16.1	16.1	9.9	9.9
1,000	60.3	60.6	28.5	28.6	17.9	18.0
1,500	85.7	86.5	40.9	41.2	25.9	26.1

The change in the weighting affects the cost by 3 mills or 3.1 percent for a load of 10 tons and a haul of 10 miles. It tapers off to zero at 500 miles. At 1,500 miles, the difference is 0.9 percent.

If the factor for interchange switching is changed from .45 to .50 and for intertrain and intratrain switching from .25 to .30, leaving the other factors as they are, (i.e., 1.0 and 0.80) the effect on the less-carload costs in cents per 100 pounds for different weight loads will be as follows:

Table 27. Comparison of the Less-carload Costs in Cents Per 100 Pounds - (Box Cars). Based on a Change of Five Percentage Points in the Weighting Given Interchange and Intertrain and Intratrain Switching

Haul in miles	Net load of 3 tons		Net load of 5 tons		Net load of 7 tons	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
10	45.8	45.0	37.6	37.0	34.0	33.7
50	53.5	52.7	42.5	42.0	37.8	37.5
100	63.1	62.4	48.7	48.3	42.6	42.3
200	82.3	81.7	61.1	60.8	52.1	51.8
300	101.4	101.0	73.5	73.3	61.6	61.4
500	139.8	139.7	98.3	98.2	80.6	80.5
1,000	235.7	236.3	160.4	160.7	128.1	128.3
1,500	331.6	332.9	222.4	223.1	175.6	176.1

The change in the cost as the result of the adjustment ranges from a reduction of 8 mills or 1.7 percent for a load of 3 tons and a haul of 10 miles to an increase of 0.3 percent for a load of 7 tons and a haul of 1,500 miles.

If the weighting factor for carrier terminal switching at freighthouse tracks is given a value of .70 in lieu of .80, and the other factors remain the same (i.e., 1.0, 0.45 and 0.25) the effect on the less-carload cost in cents per 100 pounds for net loads of 3, 5 and 7 tons for a typical road will be as shown in Table 28.

Table 28. Comparison of the Less-carload Cost in Cents Per 100 Pounds - (Box Cars). Based on a Change of Ten Percentage Points in the Weighting Given Carrier Terminal Switching at Freighthouse Tracks

Haul in miles	Net load of 3 tons		Net load of 5 tons		Net load of 7 tons	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
10	45.8	43.9	37.6	36.4	34.0	33.2
50	53.5	51.5	42.5	41.3	37.8	37.0
100	63.1	61.0	48.7	47.4	42.6	41.7
200	82.3	79.9	61.1	59.7	52.1	51.1
300	101.4	98.9	73.5	72.0	61.6	60.5
500	139.8	136.3	98.3	96.5	80.6	79.3
1,000	235.7	231.7	160.4	157.9	128.1	126.3
1,500	331.6	326.5	222.4	219.3	175.6	173.3

The effect of this change in the weighting is to reduce the cost by 1.9 cents or 4.1 percent for a net load of 3 tons and a haul of 10 miles. For a load of 7 tons and a haul of 500 miles, the reduction in the cost amounts to 1.6 percent. For a load of 7 tons and a haul of 1,500 miles, the reduction would be 1.3 percent.

Effect of an adjustment in the computation of the active car days:

The active car days in the several classes of switching service and in detention for loading and unloading were computed by multiplying the total cars handled by the car-day factors shown in Appendix A. The car days in running service were developed from the train hours. This resulted in the following approximate distribution of the car days for other than mileage cars, class I carriers:

Car days treated as variable with length of haul:

1.	Car days in running service	17.0 percent
2.	Car days in interchange, intertrain and intratrain switching	22.4
3.	Subtotal	39.4

Car days treated as independent of the length of haul:

4.	Car days in switching to and from industry, team and freighthouse tracks	23.5 percent
5.	Car days in detention for loading and unloading	37.1
6.	Subtotal	60.6
7.	Grand total	100.0

Carriers having longer or shorter hauls than the average would, of course, have a distribution somewhat different from that here indicated. The expenses distributed on the basis of active car days constitute between 5 and 6 percent of the total operating expenses, rents and taxes of the Class I carriers. It would take a change of approximately ten percentage points in the percent of active car days treated as variable with the length of haul and a corresponding change of ten percentage points in the percent of active car days treated as independent of the length of haul to affect the total cost on relatively short hauls by as much as 1 percent. At any length of haul approaching the average, the effect of any change in the car-day factors would be nil. It does not appear that any territorial deviations from the car-day factors shown would be great enough to significantly affect the territorial cost.

Effect of a change in the number of cars handled in intertrain and intratrain switching:

The count of cars originated, terminated and interchanged is based upon data appearing in carriers' annual reports. The number of cars given an intertrain and intratrain switching was computed as explained in Appendix A by dividing the total car-miles by 150. The switching expenses charged to intertrain and intratrain switching constitute between 4 and 5 percent of the total operating expenses, rents and taxes, and something in excess of 6 percent of the running expenses only. As these switching expenses are treated as variable with the length of the haul, an adjustment of 10 percent in the factor of 150 would have the effect of increasing or decreasing the expenses treated as variable with distance by about 0.4 percent. The carrier's aggregate expenses would remain unaffected as any reduction in the intertrain or intratrain switching expenses would result in such expenses being redistributed between all services on the basis of the remaining switching expenses. On average length hauls the effect would be nil.

Effect of inadequacy of data obtained concerning less-carload platform costs:

The problems confronted in obtaining platform labor costs per ton have been outlined in Chapter IV. For purposes of analysis, the station platform labor cost, Account 373, as used in computing the territorial cost scales and before inclusion of any overhead expenses, is shown in Table 29.

Table 29. Territorial Average Labor Cost Per Ton for Station Platform Labor Exclusive of Overheads

Territory (1)	Platform labor (2)	Tons (3)	Cost per ton (4)
New England	$2,612,552	4,016,294	$0.65049
Eastern, excluding New England and Northern Illinois	13,526,599	19,004,200	.71177
Eastern, excluding New England but including Northern Illinois	16,127,135	21,021,783	.76716
Eastern, including New England and Northern Illinois	18,739,687	25,038,077	.74845
Pocahontas	1,098,558	1,466,094	.74931
Southern	5,332,079	7,567,404	.7313
Western Trunk Line, excluding Northern Illinois and Southern Missouri	5,416,615	5,984,921	.90504
Western Trunk Line, including Northern Illinois but excluding Southern Missouri	8,017,151	8,002,504	1.00183
Southwestern, including Southern Missouri	1,951,478	3,022,177	.64572
Mountain Pacific	3,336,987	3,254,005	1.02550
Total Western	13,305,616	14,278,586	.93185
Total United States	36,975,404	46,332,678	.77862
Northern Illinois	2,600,536	2,017,583	1.28893
Southern Missouri	70,955	111,333	.63732

It is probable that the platform labor cost per ton in all territories will range between 80 cents and $1.00 and where the expenses per ton are below this limit, the less-carload costs developed therefrom may represent some understatement. However, such understatement is not represented by the full amount of the difference between the platform costs shown and any true cost that might be developed for the reason any station expenses not included as platform labor are otherwise included in the study under station expenses "other employees." The effect may be, however, to shift certain of the expenses

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from less-carload to carload. For the purpose of providing information on this subject data were developed to show the effect if the platform labor cost were increased by 20 cents per ton accompanied by a corresponding reduction in the station expense for "other employees." The data were obtained by applying rail cost formula, Form A, to a representative class I railroad, assuming platform cost per ton, exclusive of overheads, of, first, 102 cents and, secondly, 122 cents. The effect on the less-carload costs per hundred pounds as the result of such adjustment is shown in Table 30.

Table 30. Comparison of the Less-carload Costs Per Hundred Pounds Assuming an Increase of 20 Cents Per Hundred Pounds in the Platform Costs but with a Corresponding Decrease in the Station Expenses for "Other Employees"

Haul in miles	Net load of 3 tons		Net load of 5 tons		Net load of 7 tons	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
10	45.8¢	46.9¢	37.6¢	38.6¢	34.0¢	35.1¢
50	53.5¢	54.7¢	42.5¢	43.7¢	37.8¢	39.0¢
100	63.1¢	64.4¢	48.7¢	50.0¢	42.6¢	43.9¢
200	82.3¢	83.9¢	61.1¢	62.7¢	52.1¢	53.7¢
300	101.4¢	103.4¢	73.5¢	75.4¢	61.6¢	63.5¢
500	139.8¢	142.3¢	98.3¢	100.8¢	80.6¢	83.1¢
1,000	235.7¢	239.7¢	160.4¢	164.3¢	128.1¢	132.0¢
1,500	334.6¢	337.1¢	222.4¢	227.8¢	175.6¢	181.0¢

The percent increase occasioned by the adjustment varies from 1.7 percent for a load of 3 tons hauled 1,500 miles to 3.2 percent for a load of 7 tons hauled 10 miles.

The contingent effect on the carload costs follows from a reduction in the total clerical costs, a portion of which was assigned to carload traffic. The carload cost adjustment in cents per 100 pounds is shown in Table 31.

Table 31. Comparison of the Carload Costs Per Hundred Pounds Assuming an Increase of 20 Cents Per Ton in the Station Platform Labor Cost Accompanied by a Corresponding Reduction in the Station Expenses for "Other Employees"

Haul in miles	Net load of 10 tons		Net load of 25 tons		Net load of 50 tons	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
10	9.8¢	9.7¢	4.0¢	3.9¢	2.0¢	2.0¢
50	11.9¢	11.7¢	5.0¢	4.9¢	2.7¢	2.6¢
100	14.4¢	14.3¢	6.2¢	6.1¢	3.5¢	3.4¢
200	19.5¢	19.3¢	8.7¢	8.6¢	5.1¢	5.0¢
300	24.6¢	24.4¢	11.2¢	11.1¢	6.7¢	6.6¢
500	34.8¢	34.6¢	16.1¢	16.0¢	9.9¢	9.8¢
1,000	60.3¢	60.1¢	23.5¢	28.4¢	17.9¢	17.9¢
1,500	85.7¢	85.6¢	40.9¢	40.8¢	25.9¢	25.9¢

The above adjustments range from no change for a load of 50 tons hauled 10, 1,000 and 1,500 miles to a decrease of 1.7 percent for a load of 10 tons hauled 50 miles.

Effect of an overstatement of the average load on less-carload traffic:

The number of cars of less-carload traffic handled are based on the less-carload tons appearing in Annual Report Schedule 541 and the average load appearing in the Forwarder Report, Senate Resolution 146, 76th Congress, 1st Session, for the test week ended October 7, 1939. As the month of October is usually a period of high traffic, the opportunity of obtaining heavier than average loading is present, with the consequence that the loading factors used may be somewhat overstated. 1/ No information is available as to the degree to which such overstatement exists, but assuming the overstatement amounts to one ton per car, the costs have been recomputed for a representative class I railroad for net loads of 3, 5 and 7 tons. The data appear in Table 32. The effect is to revise slightly the assignment and apportionment of expenses between carload and less-carload traffic which in turn has but a slight effect upon the cost scales.

1/ See Chapter III, Table 8, for the average loads developed from the Forwarder Report on less-carload traffic.

Table 32. Comparison of Less-carload Costs Based upon the Average Load Appearing in the Forwarder Report and the Costs Developed Assuming a Reduction of 1 Ton in Such Average Load 1/

Haul in miles	Net load of 3 tons		Net load of 5 tons		Net load of 7 tons	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
10	45.8¢	45.5¢	37.6¢	37.4¢	34.0¢	33.9¢
50	53.5¢	53.2¢	42.5¢	42.4¢	37.8¢	37.7¢
100	63.1¢	62.8¢	48.7¢	48.6¢	42.6¢	42.5¢
200	82.3¢	82.0¢	61.1¢	61.0¢	52.1¢	52.0¢
300	101.4¢	101.2¢	73.5¢	73.4¢	61.6¢	61.5¢
500	139.8¢	139.7¢	98.3¢	98.3¢	80.6¢	80.5¢
1,000	235.7¢	235.7¢	160.4¢	160.3¢	128.1¢	128.0¢
1,500	331.6¢	331.7¢	222.4¢	222.4¢	175.6¢	175.6¢

The greatest relative change is for a load of 3 tons and a haul of 10 miles amounting to 3 mills or 0.7 percent. The principal effect of any overstatement of the average loads appearing in the Forwarder Report is in the use of such average loads for the purpose of drawing off costs from the cost scales.

The effect of a reduction in the average load on the cost of carload traffic moving in box cars is negligible as shown in Table 33.

1/ The cost formula makes use of three averages appearing in the Forwarder Report. See Statement 6, columns (13), (14) and (15), respectively. For the purposes of this restatement each of the figures was reduced by 1 ton.

Table 33. Comparison of the Carload Costs Per Hundred Pounds Based on the Average Load for Less-carload Traffic Appearing in the Forwarder Report with the Costs Developed Assuming a Reduction of One Ton in Such Average Load

Haul in miles	Net load of 10 tons		Net load of 25 tons		Net load of 50 tons	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
10	9.8¢	9.7¢	4.0¢	3.9¢	2.0¢	2.0¢
50	11.9¢	11.8¢	5.0¢	4.9¢	2.7¢	2.6¢
100	14.4¢	14.3¢	6.2¢	6.2¢	3.5¢	3.4¢
200	19.5¢	19.4¢	8.7¢	8.6¢	5.1¢	5.0¢
300	24.6¢	24.5¢	11.2¢	11.1¢	6.7¢	6.6¢
500	34.8¢	34.6¢	16.1¢	16.0¢	9.9¢	9.8¢
1,000	60.3¢	60.0¢	28.5¢	28.4¢	17.9¢	17.8¢
1,500	85.7¢	85.4¢	40.9¢	40.7¢	25.9¢	25.8¢

Effect of an error in the weighting given a carload consignment versus a less-carload consignment in distribution of station costs:

In apportioning the station costs, other than platform labor, to the carload and less-carload traffic, a weight of 1 was given to a less-carload consignment and a weight of 5 to a carload consignment. This ratio was based upon (a) station time studies made by the California Railroad Commission in Case 4402 (See Exhibit 2, pages 98-111) and (b) station time studies conducted by the Boston and Maine and Maine Central in I.& S. Docket 4690, All Commodities, L.C.L. between Maine, Massachusetts and New Hampshire. No time was available to enable additional station studies to be made for the purpose of this study. As a matter of information, the effect of substituting a weight of 4 in lieu of 5 for the carload consignment is shown in Table 34.

Table 34. Comparison of Less-carload Costs in Cents Per Hundred Pounds Giving Weights of 5 and 4, Respectively, to the Carload Consignment in the Distribution of the Station Clerical Expenses 1/

Haul in miles	Net load of 3 tons		Net load of 5 tons		Net load of 7 tons	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
10	45.8¢	47.3¢	37.6¢	39.0¢	34.0¢	35.5¢
50	53.5¢	54.9¢	42.5¢	44.0¢	37.8¢	39.3¢
100	63.1¢	64.5¢	48.7¢	50.2¢	42.6¢	44.0¢
200	82.3¢	83.7¢	61.1¢	62.6¢	52.1¢	53.5¢
300	101.4¢	102.9¢	73.5¢	75.0¢	61.6¢	63.0¢
500	139.8¢	141.3¢	98.3¢	99.8¢	80.6¢	82.0¢
1,000	235.7¢	237.2¢	160.4¢	161.8¢	128.1¢	129.5¢
1,500	331.6¢	333.1¢	222.4¢	223.8¢	175.6¢	177.0¢

The greatest relative increase is 1.5 cents, or 4.4 percent, for a load of 7 tons hauled 10 miles. The least relative effect is 1.5 cents, or 0.5 percent, for a load of 3 tons hauled 1,500 miles.

The corresponding effect on the carload costs in cents per hundred pounds is shown in Table 35.

Table 35. Comparison of Carload Costs in Cents Per 100 Pounds Giving Weights of 5 and 4, Respectively, to the Carload Consignments in the Distribution of Station Clerical Expenses

Haul in miles	Net load of 10 tons		Net load of 25 tons		Net load of 50 tons	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
10	9.8¢	9.8¢	4.0¢	3.9¢	2.0¢	2.0¢
50	11.9¢	11.8¢	5.0¢	4.9¢	2.7¢	2.7¢
100	14.4¢	14.3¢	6.2¢	6.2¢	3.5¢	3.5¢
200	19.5¢	19.4¢	8.7¢	8.6¢	5.1¢	5.1¢
300	24.6¢	24.5¢	11.2¢	11.1¢	6.7¢	6.7¢
500	34.8¢	34.7¢	16.1¢	16.1¢	9.9¢	9.9¢
1,000	60.3¢	60.2¢	28.5¢	28.5¢	17.9¢	17.9¢
1,500	85.7¢	85.6¢	40.9¢	40.8¢	25.9¢	25.9¢

1/ Study computed by applying rail cost formula, Form A, to a representative class I carrier using first a weight of 5, and, secondly, a weight of 4 to the carload consignments in distributing the station clerical expenses. Costs include operating expenses, rents and taxes (Cost Level II).

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In no case are the carload costs effected by more than one mill.

Costs for traffic consistently moving in lighter than average, or in heavier than average, trains:

The costs developed in this study are territorial averages reflecting all operating conditions. If a segregation of costs were made between main and branch line operations, it is reasonable to expect that the costs for the branch lines would be higher than the costs set forth in this study. On the other hand the cost for main line operations would be only slightly less than the figures shown in this study, as the overwhelming proportion of the tonnage hauled by most carriers is handled in main line through trains. Where this condition obtains the average cost for this main line traffic is not greatly different from the system average cost for all traffic. If the main line costs were segregated to reflect the unit expense for heavy tonnage trains, such as coal drags, as compared to the cost for scheduled merchandise trains with a lighter tonnage, some difference in cost would no doubt be found. This leads to the observation that where one type of traffic predominantly moves in either heavy tonnage or light tonnage trains, the costs for such traffic will be greater or less than those shown in the cost scales. Coal is an example of tonnage which may be handled regularly in heavier than average trains while less-carload traffic may be at the other extreme.

To provide information relative to the fluctuation in costs with variations in the weight of the train the expense was developed for the handling of varying net loads in trains of 500, 1,000, 2,000, 3,000 and 4,000 trailing gross tons.

Table 36 shows the cost for the various weight trains for varying distances. The data were obtained by applying rail cost formula, Form B, 1/ to the system accounting and statistical data of a representative class I carrier. The assumption was made that trains of 500 and 1,000 tons were hauled by locomotives having a gross weight of 150 tons including tender, and that the trains of 2,000, 3,000 and 4,000 tons were hauled by locomotives weighing 200 tons. For purposes of comparison an index is shown in columns (3), (5) and (7) based on the cost for a 2,000-ton train taken as 100.

1/ Rail cost formula, Form B, was developed by the Bureau of Statistics for the purpose of reflecting, among other things, the cost based upon the weight of the train in which the traffic is handled.

Table 36. Comparison of the Cost Per Hundred Pounds for Varying Trainload Weights Based on 25-Ton Load Handled in Box Cars 1/

Gross tons of cars, contents and cabooses (1)	25 miles		50 miles		300 miles	
	Cost (2)	Index (3)	Cost (4)	Index (5)	Cost (6)	Index (7)
500	5.14¢	115	6.31¢	127	-	-
1,000	4.67¢	105	5.37¢	108	-	-
2,000	4.46¢	100	4.96¢	100	9.93¢	100
3,000	4.38¢	98	4.80¢	97	9.06¢	91
4,000	4.31¢	97	4.72¢	95	8.46¢	85

The above comparison is based on the assumption that the engine crew and train crew costs per mile are the same for all weight trains. The comparison shown in Table 37 assumes that the train and engine-crew costs per train-mile, including a prorata portion of the superintendence, Account 371, and the accompanying payroll taxes, are 20 percent 2/ higher for trains of 500 and 1,000 tons than trains of 2,000 to 4,000 tons.

Table 37. Comparison of the Cost Per Hundred Pounds for Varying Trainload Weights Based on a 25-Ton Load in Box Cars. Assumes a 20-Percent Increase in Train and Engine Crew Compensation Per Train-mile for Trains of 500 and 1,000 Tons over That for Trains of 2,000 Tons

Gross tons of cars, contents and cabooses (1)	25-mile haul		50-mile haul	
	Cost (2)	Index (3)	Cost (4)	Index (5)
500	5.21¢	117	6.45¢	130
1,000	4.70¢	105	5.43¢	109
2,000	4.46¢	100	4.96¢	100

1/ Includes operating expenses, rents and taxes, Cost Level II. Based on ratio of empty car-miles to loaded car-miles of 0.36.

2/ The figure of 20 percent represents an arbitrary allowance for the higher wage scale and increased overtime commonly obtaining in way train operation.

The reason for the relatively small adjustment occasioned by changes in the weight of the train on short hauls is that the expenses affected by the weight of the train, i.e., the running expenses, constitute but a small part of the total cost. This is indicated in Table 38 which shows the percent that the running cost bears to the total cost for hauls of 25, 50 and 300 miles and train loads of from 500 to 4,000 tons.

Table 38. Percentage Relation of the Running Cost to the Total Cost 1/

Weight of trains including locomotive and tender (tons) (1)	25-mile haul		50-mile haul		300-mile haul	
	Unadjusted expenses (2)	Adjusted for 20% increase trainmen and enginemen (3)	Unadjusted expenses (4)	Adjusted for 20% increase trainmen and enginemen (5)	Unadjusted expenses (6)	Adjusted for 20% increase trainmen and enginemen (7)
500	21.43	22.42	34.98	36.27	-	-
1,000	14.18	14.75	24.60	25.52	-	-
2,000	10.40	-	18.72	-	56.05	-
3,000	8.85	-	16.17	-	51.87	-
4,000	7.47	-	14.34	-	49.45	-

The comparisons shown above necessarily represent approximations based on average terminal costs. 2/ They nevertheless serve to indicate that on short hauls of 25 to 50 miles the running expenses account for a minor part of the total costs with the result that substantial changes in the running cost have but a limited effect upon the total cost. No data were available to compute the relative cost for train switching as compared to yard switching and the terminal costs are based upon the system average expenses for the latter.

Error in use of single ratio to allow for a return on traffic moving in both railroad owned and privately-owned equipment:

Under the formula used the allowance for a return is obtained by multiplying Cost Level II by a given percentage which is the same irrespective of whether the traffic is moving in railroad owned or privately-owned equipment. This involves some error inasmuch as the rental

1/ Includes an allowance for intertrain and intratrain switching assuming one handling every 150 miles of haul. This is distributed prorata over the shorter hauls of 25 and 50 miles.

2/ For the purpose of this study the yard engine minutes per loaded car were assumed to be 27 minutes at origin and 27 minutes at destination (based on averages for both large and small terminals).

payments on private line cars include an allowance for a return upon the value of this equipment. To expand the cost, including such rental, for a return is to include the return on freight-train car equipment twice. On the other hand, traffic moving in railroad-owned equipment is relieved of the full cost of providing a return on the property used by it in the amount that the burden placed on the traffic moving in private line cars is excessive.

The error may be eliminated by computing the ratio of the return on the carrier property used in common by all traffic, (i.e., the total property excluding freight trains cars) to the total expenses for all traffic. Next, the ratio of the return upon the value of the railroad-owned freight-train cars to the operating expenses for the traffic handled in this equipment should be computed and added to the ratio previously obtained. The sum of the two ratios provides that ratio applicable on traffic handled in railroad-owned equipment. The ratio first computed, with possibly some increase for return on special facilities used, is applicable to commodities handled in private line cars.

The principal problem faced in making the required adjustment is that of separating the operating expenses (running, switching and station) for the traffic moving in railroad-owned equipment from that for traffic moving in privately owned equipment. For purposes herein this was accomplished by separating each group of expenses on the basis of car-miles, gross ton-miles, or cars handled, as appropriate, using for this purpose the aggregate expenses for all class I carriers. The results indicated that a 5-3/4 percent return upon the value of the property common to all freight service amounted to 44.39 percent of the total carload operating expenses, rents and taxes. The allowance for a 5-3/4 percent return upon the value of railroad-owned freight-train cars amounted to 5.42 percent of the operating expenses, rents and taxes assigned and apportioned to the traffic moving in such cars. The sum of these two figures, 49.81 percent, constitutes that figure properly applicable against traffic moving in railroad-owned cars. The two figures of 44.39 and 49.81 percent applicable to traffic moving in private line and railroad-owned equipment, respectively, may be compared with the single figure of 48.05 percent shown in the cost scales, Table 87, column (66).

From the foregoing the conclusion may be drawn that the figure of 48.05 percent used in the cost scales is high by approximately 3.7 percentage points when applied to traffic moving in private line equipment and low by approximately 1.8 percentage points when applied to traffic moving in railroad-owned equipment. The comparable errors when based on a 4-percent return amount to 2.6 and 1.2 percentage points, respectively. These errors relate to the ratio by which the operating expenses, rents and taxes are expanded to include return. The error expressed in terms of the costs after expansion to Cost Levels V(a) or

V(b) amounts to an understatement of approximately 1 percent for traffic moving in railroad-owned equipment and an overstatement of approximately 2 percent for traffic moving in private line equipment.

Resume:

This chapter has dealt with certain technical problems involved in cost finding. When subsequent studies of this character are made, a refinement will be possible in the various respects above indicated if the time to conduct the necessary field studies is allowed. However, before the additional time and expense are incurred in such special studies, it appears desirable to consider in a broad way what are the relative costs among the rate territories and what part costs should play in a revision of rate scales. The present study is adequate for this purpose as it appears from the above discussion that the possible errors are of a minor character.

In addition to the technical problems of cost findin which may affect the final costs by a relatively small amount one way or another, other factors must necessarily be given consideration in applying the cost scales to actual rate-making, such as the following: The average circuity of haul obtaining in each territory; the determination of what constitutes a proper rate of return; the degree to which rates on some traffic should be based on out-of-pocket costs to meet truck and water competition, with an accompanying upward adjustment on the noncompetitive traffic; and the problem of developing a proper relation between cost and the rates applicable to each class rating.

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APPENDIX A

Explanation of Factors Used in the Formula

Weighting factors used in computing switching costs:

In securing the separation of the switching expenses between the various classes of switching on an equated car handled basis, the following weighting was applied to the number of cars handled in each of the classes of switching:

Carrier terminal switching and connection terminal switching, industry and team tracks, including an allowance for intermediate switching 1/	1.00
Carrier terminal switching and connection terminal switching, freighthouse tracks	.80
Interchange switching, including allowance for intermediate switching 1/	.45
Intertrain and intratrain switching	.25

The above weighting applies to the switching movement of a car in the loaded direction only. If one assumes that the ratio of the empty cars switched to loaded cars switched for each of the four classes of switching are 1.00, 0.80, 0.65 and 0.65, respectively, the relative weighting for the total switching in each class for the loaded plus the empty movement, becomes as follows: 1.00, 0.72, 0.37, and 0.21. The weight thus given for an interchange switching of 0.37 reflects the cost for the switching in both the loaded and empty direction by a single carrier. This figure should be doubled to reflect the relative work done by both the carriers party to an interchange.

The above switching factors are based upon switching data for a large number of cities introduced in cases before the Commission, including the following:

Switching at Kansas City, Mo., and Related Points	96 I.C.C. 538
Switching at St. Louis, Mo., and East St. Louis, Ill., Also Between St. Louis, Mo., and Suburban Stations in Missouri	120 I.C.C. 216
Switching at Little Rock and North Little Rock, Ark.	140 I.C.C. 583
Des Moines Union Railway Switching	231 I.C.C. 631
Naval Stores from Mississippi to Gulf Ports	235 I.C.C. 723
Packing House Products from Denver and Pueblo to Arizona	238 I.C.C. 569
Petroleum and Petroleum Products from California to Arizona	241 I.C.C. 21
Docket 26712, Rail-Barge Joint Rates	
F.S.A. 18404, Sugar from California to North Atlantic Ports	

1/ Allowance based on the assumption that, exclusive of the work done by switching and terminal companies, not over 5.0 percent of the cars handled received an intermediate switching. See Appendix E for definition of intermediate switching. Switching and terminal companies are excluded from study.

Car-day factors:

The active car days in running service were computed by multiplying the system train hours, including train switching hours, by the average cars per train and dividing the product by 24. The car days in switching service were computed by multiplying the number of loaded and empty cars handled by the following car-day factors:

Carrier terminal and connection terminal switching, industry, teamtracks and freighthouses	0.50 days
Interchange switching per carrier	.33 days
Intertrain and intratrain switching	.33 days
Detention for loading or unloading (but not both) at industry and teamtracks	1.75 days
Detention for loading or unloading at freighthouses	.50 days

Car days for "other than mileage" cars in running service were obtained by multiplying the total days in running service by the ratio of the car-miles for "other than mileage" cars to the total car-miles. The car days for "other than mileage" cars in switching service were obtained by--

(a) Multiplying the sum of the car days for interchange switching and intertrain and intratrain switching by the ratio of the car-miles for "other than mileage" cars to the total car-miles, and

(b) Multiplying the remaining car days in switching service, excluding freighthouse cars, by the ratio of the loaded cars handled of "other than mileage" cars to the total loaded cars handled. Switching car days occasioned by freighthouse switching were assigned to "other than mileage" cars.

The source of the car day factors is based upon an analysis of the cases mentioned above in connection with switching factors.

Separation of car-miles; running and switching:

The car-miles in running service were determined from the annual report, Schedule 53L, items 40, 41 and 43. Car-miles in switching service were obtained by multiplying the number of loaded and empty cars handled in each class of switching by the following mileages:

Carrier terminal and connection terminal switching, industry and team tracks	4.0 miles
Carrier terminal and connection terminal switching, freighthouses	3.5 miles
Interchange switching per carrier	2.75 miles
Intertrain and intratrain switching	1.00 miles

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The mileages were based on a study by the Engineering Section of the Bureau of Valuation of the terminal lay-outs of a number of railroads. A weight of 1.0 is given to a car-mile in running service and a weight of 2.0 to a car-mile in switching service. This weighting is based on a study by the Engineering Section of the Bureau of Valuation.

Count of cars:

The switching factors, car-day factors, and mileage factors set forth above are applied to the count of the loaded cars plus the empty cars handled in each class of switching. The count of cars was obtained as follows:

Item	Source
1. Carrier and connection terminal switching, industry and team tracks, loads	From A.R. Sch. 541, Class 850, sum of columns (d), and (f) plus twice column (b)
2. Carrier and connection terminal switching, industry and team tracks, empties	Number of loads handled multiplied by the ratio of the total empties spotted and switched out to the total loads spotted and switched out. For the purpose of carload traffic, the ratio used was 1.0.
3. Carrier terminal switching, nonrevenue traffic, loads	Developed by dividing the total tons of nonrevenue freight carried by the average net load of company material to obtain the total number of loaded cars handled, nonrevenue freight. This latter figure was multiplied by 2 assuming that these nonrevenue loads were principally local to one line.
4. Carrier terminal switching, nonrevenue traffic, empties	Number of loads, nonrevenue, multiplied by the ratio of 1.0.
5. Carrier and connection terminal switching, freighthouse tracks, loads	(a) Total tons of less-carload traffic handled - From A.R. Sch. 541, Class 710, sum of columns (e) plus (g) plus twice column (c) (b) Average load, tons per loaded car - From Senate Resolution 146, 76th Congress, First Session, Vol. 1, Statement 6, column (14) (c) Number of loaded cars - Line (a) divided by line (b) (d) Number of loaded cars originated or terminated, re transfers - Tons transferred divided by average load, line (b) (e) Total cars - Line (c) plus line (d)

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Item	Source
6. Carrier and connection terminal switching, freighthouse tracks, empties	Number of loads handled multiplied by the ratio of the total empties spotted and switched out to the total loads spotted and switched out. For the purpose of this study the ratio used was 0.80.
7. Interchange switching, loads	Computed as follows: (a) Number of cars, carload traffic - From A.R. Sch. 541, Class 850, sum of columns (d) plus (f) plus twice column (h) Number of cars less-carload traffic: (b) Number tons received from and delivered to connections - From A.R. Sch. 541, class 710, columns (e) plus (g) plus twice column (i) (c) Percentage of tons (interline traffic) in through cars not worked at interchange - From Senate Res. 146, Statement 6, column (3) divided by (2) (d) Number of tons (interline) in through cars not worked at interchange points - Line (b) x line (c) (e) Average tons for through car, interline - From Senate Res. 146, Statement 6, column (13) (f) Number of cars not worked at interchange - Line (d) divided by line (e) (g) Total cars, carload and less-carload - Line (a) plus line (f)
8. Interchange switching, empties	Number of empties computed by multiplying the number of loads by the system ratio of empty car-miles to loaded car-miles.
9. Intertrain and intratrain switching, loads	Computed by dividing the total car-miles by 150. Based on factor of 150 car-miles per handling. This factor was developed from studies introduced before the Commission including Packing House Products from Denver and Pueblo to Arizona, 238 I.C.C. 569; Petroleum and Petroleum Products from California to Arizona, 241 I.C.C.21; and Sugar from California to North Atlantic Ports, F.S.A. 18444. These studies show the distance between intertrain and intratrain handlings to range from approximately 100 to 160 miles, and the average car-miles for intertrain and intratrain switching to range from 125 to 160 miles.

Item	Source
10. Intertrain and intratrain switching, empties	The number of empties computed by multiplying the number of loads by the system ratio of empty car-miles to loaded car-miles

The ratio of empty cars spotted and pulled to loaded cars spotted and pulled was based upon fragmentary evidence appearing in the cases above cited, which indicated that such ratio was slightly less than 1.0. However, the figure of 1.0 is used for purposes herein in conjunction with the use of a factor of 0.80 for freight-house switching. Any change in these ratios does not affect the carriers' aggregate costs, although it does affect, in some more or less negligible degree, the distribution of the expenses between line-haul and terminal and between carload and less-carload traffic. See Chapter VI for a discussion of the influence of a change in these factors.

APPENDIX C

Assignment of Commodities to That Class of Equipment in Which They Are Commonly Handled 1/

No.	Commodity group or class	Class of freight car
	GROUP I. Products of Agriculture (C. L.)	
10	Wheat	Box
20	Corn	"
30	Oats	"
40	Barley and rye	"
41	Rice	"
42	Grain, N. O. S.	"
50	Flour, wheat	"
51	Meal, corn	"
52	Flour and meal, edible, N. O. S.	"
60	Cereal food preparations, edible, N. O. S.	"
61	Mill products, N. O. S.	"
70	Hay and alfalfa	"
71	Straw	"
80	Tobacco, leaf	"
	Cotton in bales	"
	Cotton linters, noils, and regins	"
100	Cottonseed	"
101	Cottonseed meal and cake	"
110	Oranges and grapefruit	Refrigerator
111	Lemons, limes, and citrus fruits, N. O. S.	"
120	Apples, fresh	"
121	Bananas	"
122	Berries, fresh	"
123	Cantaloupes and melons, N. O. S.	"
124	Grapes, fresh	"
125	Peaches, fresh	"
126	Watermelons	"
127	Fruits, fresh, domestic, N. O. S.	"
128	Fruits, fresh, tropical, N. O. S.	"
130	Potatoes, other than sweet	"
140	Cabbage	"
141	Onions	"
142	Tomatoes	"
143	Vegetables, fresh, N. O. S.	"
150	Beans and peas, dried	Box
151	Fruits, dried or evaporated	"
152	Vegetables, dry, N. O. S.	"
160	Vegetable-oil cake and meal, except cottonseed	"
161	Peanuts	"
162	Flaxseed	"
163	Sugar beets	Gondola
164	Products of agriculture, N. O. S.	Box

See page 112 for footnote.

Appendix B

Territorial Average Tare Weights and Territorial Ratio of Empty to Loaded Car-miles by Classes of Equipment for 1939 1/

Terr. No.	Territory	Average tare weight in tons by classes of equipment						Ratio of empty to loaded car-miles by classes of equipment						Terr. No.
	(1)	Box (2)	Flat (3)	Gondola and hopper (4)	Tank 2/ (5)	Stock (6)	Refrigerator 2/ (7)	Box (8)	Flat (9)	Gondola and hopper (10)	Tank (11)	Stock (12)	Refrigerator (13)	
1	New England	21.1	19.5	21.1	22.1	20.4	27.5	0.284	0.627	0.880	0.993	0.981	0.862	1
2	Eastern, excluding New England and Northern Illinois	23.3	20.6	22.1	24.1	20.9	27.5	.350	.839	.843	.982	1.006	.869	2
3	Eastern, excluding New England but including Northern Illinois	23.3	20.6	22.1	24.1	20.9	27.5	.350	.839	.843	.982	1.006	.869	3
4	Total Eastern, including New England and Northern Illinois	23.0	20.5	22.0	23.9	20.9	27.5	.340	.838	.845	.983	1.005	.867	4
5	Pocahontas	24.0	19.4	22.1	3/	20.8	28.5	.330	.568	.928	.999	1.500	.696	5
6	Southern	22.4	19.0	21.2	21.3	20.5	27.3	.294	.789	.918	.960	.897	.848	6
7	Southwestern, including Southern Missouri	22.9	18.5	21.9	21.9	21.0	27.9	.378	.676	.802	.955	.832	.658	7
8	Western Trunk Line, excluding Northern Illinois and Southern Missouri	22.0	19.1	21.0	23.2	20.1	27.5	.341	.703	.830	.990	.906	.698	8
9	Western Trunk Line, including Northern Illinois but excluding Southern Missouri	22.0	19.1	21.0	23.2	20.1	27.5	.341	.703	.830	.990	.906	.698	9
10	Mountain Pacific	22.7	16.1	23.3	23.5	19.6	27.7	.333	.760	.789	1.000	.879	.734	10
11	Total Western, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri	22.5	17.4	21.7	22.7	20.1	27.2	.351	.723	.812	.977	.880	.695	11
12	Total United States	22.8	18.1	21.9	22.8	20.4	27.3	.335	.748	.857	.977	.919	.795	12

1/ Tare weights are based on a weighted average of the tare weights for railroad owned equipment as reported by the carriers in reply to a questionnaire issued under date of November 19, 1940. Territorial averages obtained by weighting the weight reported by each carrier for each class of equipment by the number of carloads forwarded in such class of equipment by each carrier.
Ratios of empty to loaded car-miles are based on the data furnished by carriers in response to questionnaire under date of November 19, 1940. Territorial averages obtained by weighting the ratio of the empty to loaded car-miles reported by each carrier for each class of equipment by the number of carloads forwarded in such class of equipment by each carrier.

2/ Figures based on railroad owned equipment. United States average tare weights used for all territories in compiling cost scales.

3/ No information provided.

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APPENDIX C - Continued

No.	Commodity group or class	Class of freight car
	GROUP II. Animals and Products (C. L.)	
170	Horses, mules, ponies, and asses	Stock
180	Cattle and calves, single-deck	"
181	Calves, double-deck	"
190	Sheep and goats, single-deck	"
191	Sheep and goats, double-deck	"
200	Hogs, single-deck	"
201	Hogs, double-deck	"
210	Fresh meats, N. O. S.	Refrigerator
220	Meats, cured, dried, or smoked	"
221	Butterine and margarine	"
222	Packing-house products, edible, N. O. S., not including canned meats	"
230	Poultry, live	Stock
231	Poultry, dressed	Refrigerator
240	Eggs	"
250	Butter	"
251	Cheese	"
260	Wool	Box
270	Hides, green	"
271	Leather	"
280	Fish or sea-animal oil	Tank
281	Animals, live, N. O. S.	Stock
282	Animal products, N. O. S. (other than fertilizers and fertilizer materials)	Box
	GROUP III. Products of Mines (C.L.)	
290	Anthracite coal	Gondola and hopper
300	Bituminous coal	" " "
310	Coke	" " "
320	Iron ore	" " "
330	Copper ore and concentrates	" " "
331	Lead ore and concentrates	" " "
332	Zinc ore and concentrates	" " "
333	Ores and concentrates, N. O. S.	" " "
350	Gravel and sand (other than glass or molding)	" " "
351	Stone, broken, ground, or crushed	" " "
352	Stone, rough, N. O. S.	" " "
353	Stone, finished, N. O. S.	" " "
360	Petroleum, crude	Tank
370	Asphalt (Natural, by-product, or petroleum)	"
380	Salt	Box
390	Phosphate rock, crude (ground or not ground)	Gondola and hopper
391	Sulphur (brimstone)	" " "
392	Products of mines, N. O. S.	" " "

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APPENDIX C - Continued

No.	Commodity group or class	Class of freight car
	GROUP IV. Products of Forests (C. L.)	
400	Logs	Flat
401	Posts, poles, and piling	"
402	Wood (fuel)	Box
410	Ties, railroad	Gondola
420	Pulp wood	"
430	Lumber, shingles, and lath	Box
431	Box, crate, and cooperage materials	"
432	Veneer and built-up wood	"
440	Rosin	"
441	Turpentine	Tank
442	Crude rubber (not reclaimed)	Box
443	Products of forests, N. O. S.	"
	GROUP V. Manufactures and Miscellaneous (C. L.)	
450	Petroleum oils, refined, and all other gasolines	Tank
451	Fuel, road, and petroleum residual oils, N. O. S.	"
452	Lubricating oils and greases	Box
453	Petroleum products, N. O. S.	"
460	Cottonseed oil	Tank
461	Linseed oil	"
462	Vegetable oils, N. O. S.	"
470	Sugar (beet or cane)	Box
471	Table sirups and edible molasses	"
472	Molasses, blackstrap and beet residual	Tank
490	Iron, pig	Gondola
491	Iron and steel, rated 6th class in official classification, N. O. S.	"
500	Rails, fastenings, frogs, and switches	"
510	Cast-iron pipe and fittings	"
511	Iron and steel pipe and fittings, N. O. S.	"
512	Iron and steel: Nails and wire, not woven	Box
513	Iron and steel, rated 5th class in official classification, N. O. S. (also tin and terne plate)	Gondola
520	Copper: Ingot, matte, and pig	Box
521	Copper, brass, and bronze: Bar, sheet, and pipe	"
522	Lead and zinc: Ingot, pig, or bar	"
523	Aluminum: Ingot, pig, or slab	"
530	Machinery and boilers	"
540	Cement, natural or Portland (building)	"
550	Brick, common	Gondola
551	Brick, N. O. S., and building tile	Box
552	Artificial stone, N. O. S.	"
560	Lime, common (quick or slaked)	"

No.	Commodity group or class	Class of freight car
	GROUP V. Manufactures and Miscellaneous, (C. L.) - Continued	
561	Plaster (stucco or wall) and dry kalsomine ..	Box
570	Sewer pipe and drain tile (not metal)	Gondola
580	Agricultural implements and parts, N. O. S. .	Box
581	Vehicles, horse-drawn, and parts, N. O. S. ..	"
582	Tractors and parts	Gondola
583	Railway car wheels, axles, and trucks	"
590	Automobiles (Passenger)	Box
591	Autotrucks	"
592	Automobiles and autotrucks, K. D. and parts N. O. S.	"
593	Automobile and autotruck tires	"
610	Furniture, metal	"
611	Furniture, other than metal	"
620	Beverages	"
630	Ice	Refrigerator
640	Fertilizers, N. O. S.	Box
650	Newsprint paper	"
651	Printing paper, N. O. S.	"
660	Alcohol, denatured or wood	Tank
661	Sulphuric acid	"
662	Explosives, N. O. S.	Box
670	Cotton cloth and cotton fabrics, N. O. S. ...	"
671	Bagging and bags, burlap, gunny, or jute	"
680	Canned food products, N. O. S.	"
690	Tobacco, manufactured products	"
691	Paints in oil and varnishes	"
692	Furnace slag	Gondola and Hopper
693	Scrap iron and scrap steel	" " "
694	Paper bags and wrapping paper	Box
695	Paperboard, pulpboard, and wallboard (paper)	"
696	Building paper and prepared roofing materials	"
697	Building woodwork (millwork)	"
698	Soap and washing compounds	"
699	Glass, flat, other than plate	"
700	Glass: Bottles, jars, and jelly glasses	"
701	Manufactures and Miscellaneous, N. O. S.	"
	GROUP VI. L. C. L. Freight	
710	All L. C. L. freight	"

1/ The assignment of commodities is based on estimate as no data were available. The material was used for the following purposes.

1. To determine the aggregate carloads and tons handled by classes of cars from which was obtained the average net load by classes of equipment used in computing the nonrevenue gross ton-miles.
2. The separation of active car days in terminal between mileage cars and other than mileage cars.
3. The computation of the average loads by classes of equipment appearing in Chapter III, Table 4.

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APPENDIX D

Data Considered in the Determination of the Out-of-pocket Costs

This appendix reviews some of the material given consideration in computing the out-of-pockets appearing in Chapter V of this study. The data are supplementary to those referred to in Table 19 of Chapter V and show the results of studies made to determine the degree to which the transportation expenses are affected by the changes in traffic volume based on the experience of the class I carriers in recent years.

It may here be explained that if a traffic increase of 20 percent is accompanied by an increase of 20 percent in the fuel expenses, the conclusion is drawn that the fuel expenses are 100 percent variable with changes in the volume of traffic. If the fuel expenses increase by only 10 percent, the conclusion can be drawn that the fuel consumption is only 50 percent variable with traffic changes. If no increase in fuel consumption is found, it is assumed that this expense item is independent of changes in the volume of traffic. The out-of-pocket portion of the cost in each case is 100 percent, 50 percent, and zero, respectively.

One of the difficulties encountered in tracing the relation between the changes in expenses and the changes in traffic volume is that of eliminating the influence of price changes and wage adjustments. Where the study is based on an extended period of time as shown in Table 1 below, the analysis is limited to the effect of the changes in traffic volume upon the car-miles, train-miles and yard engine hours, the assumption being made that any change in these units will be followed by corresponding changes in the freight train car expenses, train service expenses and yard expenses, respectively.

In Tables 1 and 2 to follow, the changes in traffic volume are measured in terms of gross ton-miles. However, as developed in Table 1 below, any given change in the gross ton-miles is followed by a still greater change in the net ton-miles; or, as otherwise stated, the net ton-miles are something more than 100 percent variable with the gross ton-miles. From this the conclusion may be drawn that as the volume of traffic increases the tare tons required to handle a given volume of net tons is reduced. On the other hand when the traffic decreases the ratio of the tare tons to the net tons increases. It follows that the percentage by which any expense item is found to be variable with traffic changes, measured in terms of gross ton-miles, may be overstated somewhat as compared with the percent found variable when the traffic change is measured in terms of net ton-miles.

Table 1, column (2) shows the gross ton-miles of cars, contents and cabooses; column (3), the percent change from the gross ton-miles of the preceding year; column (4) the revenue net ton-miles; column (5) the percent change of the revenue ton-miles from that of the preceding year; and column (6) the percent variable of the revenue net ton-miles with changes in the gross ton-miles. The remaining columns are self-explanatory. The data are shown for the United States and for the Eastern, Southern and Western Districts. For the purpose of indicating the average or central tendency of the percent variable, the median, or middle item, is shown. The use of this average eliminates distortion occasioned by the extremes.

Table 2 shows the effect of changes in traffic volume on selected expense items or group of expenses. The study was limited to the period 1935-1939 to avoid the extreme fluctuations of the period 1930-1934. The expenses were adjusted for changes in fuel prices and basic rates of pay.

Column (2) of Table 2 shows the gross ton-miles of cars, contents and cabooses; column (3), the percent change from the gross ton-miles of the preceding year; column (4), the adjusted expenses for superintendence; column (5), the percent change of the adjusted expenses from the expenses of the preceding year; and column (6), the percent variable of the adjusted expenses with changes in the gross ton-miles. The remaining columns are self-explanatory. The data are shown for the United States and for the Eastern, Southern, and Western Districts.

The adjusted expenses shown in Table 2 were obtained by dividing the charges to each account by the index developed for the labor included in each account shown in Table 3. Where the accounts were grouped as in the case of the yard service expenses, train service expenses, and total transportation expenses (Accounts 371 to 420), the adjustment was made by individual accounts and the total of the adjustments added to or subtracted from the total of the unadjusted expenses for the group.

The wage index for employees' compensation was based on the year 1936 as 100 and reflected the following changes in the basic rates

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of pay 1/: A 2-1/2 percent restoration, effective January 1, 1935, of the 10 percent reduction in the employees' compensation made as of February 1, 1932; a 5 percent restoration, effective April 1, 1935; an increase of 5 cents per hour for all employees other than those in train and engine service and train dispatchers, effective August 1, 1937; and an increase of 44 cents per day (approximately 5.5 cents per hour) for train and engine service employees and yardmasters, effective October 1, 1937. 2/

The price index for fuel, 1936-1939, was based on the average price per equated ton of fuel consumed, using 1936 prices as 100. The price per ton was computed by dividing the total charges for fuel consumed, including freight and handling expenses, by the equated tons of fuel consumed. 3/ As the costs for the equated tons of fuel consumed were not available for the year 1935, the adjusted fuel expenses (freight) for this year were computed by multiplying the 1936 fuel cost by the ratio of the equated tons (freight) consumed in 1935 to the equated

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1/ Wage increases stated as a flat amount per hour, per day, or per month occasioned different percentage increases according to the level of wage previously earned by each group of employees. To compute the index for various groups of employees the following procedure was used based on the year 1938 as an example: The number of hours or days of straight time worked by each group of employees in 1938 was multiplied by the increase per hour or per day. The aggregate increase so determined was then divided by the actual straight time compensation earned during 1938 less the increase. The effect of this procedure was to divide the increase by the aggregate compensation which the employees would have received without such increase. The percentage indicated the effect of the increase for the group. The procedure may be illustrated as follows: During 1938 the straight time paid for, yard engineers and motormen and firemen and helpers, class I railroads, amounted to 61,519,533 hours (from Wage Statistics of class I Steam Railways in the United States for the 12 months ended December 31, 1938, Statement No. M-300, Divisions 124 and 128). The increase of 5.5 cents per hour resulted in an aggregate increase of $3,383,574. This increase was deducted from the compensation for the straight time paid for amounting to $54,890,533, resulting in a total compensation, less such increase, of $51,506,959. The increase when related to this base amounted to 6.57 percent. Based on 1936 the index for the year 1938 was therefore 106.57. Inasmuch as the wage increase was in effect for only one-quarter of the year 1937, the index for this year was 101.64, or 100 increased by one quarter of 6.57.

2/ From Historical Development of the Present Railway Wage Structure 1916-1938, Exhibit No. 1, President's Emergency Board's Hearings on Railway Wages, October 1938, pages 66, 67, 70 and 71.

3/ The statement of fuel expenses and equated tons consumed for the years 1936-1939 appears in the summary of Fuel and Power for Locomotives and Rail Motor Cars of class I Steam Railways in the United States, Statement M-230 (OS-E). Line 1-07 divided by the sum of lines 2-07, 2-13 and 2-22.

tons consumed in 1936. 1/ This provided the fuel expense for 1935 based on 1936 prices.

The wage indices shown in Table 3 were used in adjusting the expenses both for the United States and each district. A separate fuel index was computed for each territory. Except in the case of enginehouse expenses the adjustments were made by dividing the aggregate charges to the respective accounts by the index shown. In the case of enginehouse expenses the adjusted labor cost was obtained by dividing the index into the labor compensation, divisions 108, 109 and 110 ("age Statistics of class I Steam Railways in United States, Statement No. M-300). The amount of the adjustment was subsequently added to or subtracted from the total charges to Accounts 388 and 400.

Consideration was also given to data on out-of-pocket costs appearing in the following:

1. "Out-of-Pocket Cost as a Factor in Determining Freight Rates" (I.C.C., Bureau of Statistics) - by M. O. Lorenz and B. T. Elmore, 1933.

2. Study by California Railroad Commission entitled, "Rail Cost Finding for Rate-Making Purposes," introduced as Exhibit 2 in Case 4402, pp. 135-165 (1938).

3. "The Economics of Transportation" - by Kent T. Healy, Ronald Press, N.Y., 1940, Chapter 11.

4. "Railroad Costs and Volume of Traffic," Herbert Ashton, American Economic Review, Vol. XXX, No. 2, June 1940.

5. F.S.A. 18444, Sugar from California to North Atlantic Ports.

Tables 1, 2 and 3 follow herewith.

1/ Equated tons for 1935 and 1936 from the Statistics of Railways in the United States, Table 56-A, Item XIII, line 5, and freight portion of line 7 based on freight portion of Account 382, yard fuel expenses.

Appendix D

Table 1.--Percent That Freight-train Revenue Net Ton-miles, Car-miles, Train-miles, and Yard Switching Locomotive-hours Vary with Gross Ton-miles for Class I Railways for the United States and Districts
Years 1929-1940

Year	Gross ton-miles--Cars, contents, and cabooses		Revenue net ton-miles			Car-miles--Loaded, empty, and caboose			Train-miles			Yard switching locomotive-hours		
	Number	Percent change over preceding year	Number	Percent change over preceding year	Percent variable	Number	Percent change over preceding year	Percent variable	Number	Percent change over preceding year	Percent variable	Number	Percent change over preceding year	Percent variable
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	(millions)		(millions)			(millions)			(thousands)			(thousands)		
							United States							
1929	1,141,866	-	447,322	-	-	29,724	-	-	612,170	-	-	50,743	-	-
1930	1,006,505	- 11.85	383,450	- 14.28	120.51	26,330	- 11.42	96.37	538,169	- 12.09	102.03	43,499	- 14.28	120.51
1931	839,643	- 16.58	309,225	- 19.36	116.77	22,215	- 15.63	94.27	463,875	- 13.81	83.29	35,562	- 18.25	110.07
1932	657,309	- 21.72	233,977	- 24.33	112.02	17,514	- 21.16	97.42	390,439	- 15.84	72.47	27,797	- 21.84	100.55
1933	685,402	+ 4.27	249,223	+ 6.52	152.69	17,999	+ 2.77	64.87	393,359	+ .64	14.99	27,621	- .63	Inverse
1934	743,547	+ 8.48	268,711	+ 7.82	92.22	19,486	+ 8.26	97.41	421,384	+ 7.12	83.96	29,405	+ 6.46	- 16.18
1935	767,517	+ 3.22	282,037	+ 4.96	154.04	19,737	+ 1.29	40.06	429,179	+ 1.85	57.45	30,066	+ 2.25	69.88
1936	896,762	+ 16.84	339,246	+ 20.28	120.43	22,569	+ 14.34	85.15	486,255	+ 13.30	78.98	34,980	+ 16.34	97.03
1937	946,156	+ 5.51	360,620	+ 6.30	114.34	23,676	+ 4.91	89.11	502,013	+ 3.24	58.80	37,100	+ 6.06	109.98
1938	794,421	- 16.04	290,084	- 19.56	121.95	20,156	- 14.87	92.71	422,676	- 15.80	98.50	30,172	- 18.67	116.40
1939	889,679	+ 11.99	333,438	+ 14.95	124.69	22,212	+ 10.20	85.07	452,277	+ 7.00	58.38	33,505	+ 11.05	92.16
1940	978,194	+ 9.95	373,225	+ 11.93	119.90	24,238	+ 9.12	91.66	482,175	+ 6.61	66.43	36,604	+ 9.25	92.96
Median	-	-	-	-	120.43	-	-	91.66		-	72.47	-	-	97.03
							Western District							
1929	458,581	-	192,331	-	-	11,824	-	-	224,731	-	-	26,072	-	-
1930	398,405	- 13.12	160,533	- 16.53	125.99	10,337	- 12.58	95.88	193,935	- 13.70	104.42	21,865	- 16.13	122.94
1931	333,761	- 16.23	128,656	- 19.86	122.37	8,788	- 14.98	92.30	166,617	- 14.09	86.81	17,695	- 19.07	117.50
1932	262,793	- 21.26	98,578	- 23.38	109.97	6,966	- 20.73	97.51	138,736	- 16.73	78.69	13,739	- 22.36	105.17
1933	273,906	+ 4.23	104,562	+ 6.07	143.50	7,147	+ 2.59	61.23	139,754	+ .73	17.26	13,730	- .06	Inverse
1934	291,499	+ 6.31	112,261	+ 7.36	116.64	7,515	+ 5.16	81.77	146,673	+ 4.95	78.45	14,394	+ 4.83	76.55
1935	297,374	+ 2.12	116,629	+ 3.89	183.49	7,538	+ .30	14.15	147,732	+ .72	33.96	14,805	+ 2.85	134.43
1936	342,954	+ 15.33	138,202	+ 18.50	120.68	8,511	+ 12.92	84.28	166,643	+ 12.80	83.50	17,292	+ 16.80	109.59
1937	360,593	+ 5.14	145,618	+ 5.37	104.47	8,874	+ 4.26	82.88	170,486	+ 2.31	44.94	18,297	+ 5.81	113.04
1938	288,599	- 19.97	111,033	- 23.75	116.93	7,269	- 18.09	90.79	137,262	- 19.49	97.60	14,055	- 23.18	116.07
1939	336,795	+ 16.70	133,910	+ 20.60	123.35	8,318	+ 14.43	86.41	152,895	+ 11.39	68.20	16,275	+ 15.79	94.52
1940	373,991	+ 11.04	150,698	+ 12.54	113.59	9,165	+ 10.19	92.30	166,542	+ 8.93	80.89	18,133	+ 11.42	103.44
Median	-	-	-	-	120.68	-	-	86.41	-	-	78.69	-	-	109.59

(Continued)

- Decrease.
+ Increase.

Source: Gross ton-miles--Cars, contents, and cabooses from ICC Statement M-211, item 6-05. Revenue net ton-miles from ICC Statistics of Railways in the United States, Table 44. Car-miles--Loaded, empty, and caboose from ICC Statement M-211, item 4-09, plus item 4-10. Train miles from ICC Statement M-211, item 2-03. Yard switching locomotive hours for years 1925-1939 from Statistics of Railways in the United States, Table 158 (locomotive-miles ÷ 6). For the year 1940 from ICC Statement M-215, item 1-06. Switching and terminal companies excluded from total on basis of data appearing in working papers of Bureau of Statistics.

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Appendix D

Table 1.--Percent That Freight-train Revenue Net Ton-miles, Car-miles, Train-miles, and Yard Switching Locomotive-hours Vary with Gross Ton-miles for Class I Railways for the United States and Districts - Continued
Years 1929-1940

Year	Gross ton-miles--Cars, contents, and cabooses: Number	Percent change over preceding year	Revenue net ton-miles: Number	Percent change over preceding year	Percent variable	Car-miles--Loaded, empty, and caboose: Number	Percent change over preceding year	Percent variable	Train-miles: Number	Percent change over preceding year	Percent variable	Yard switching locomotive-hours: Number	Percent change over preceding year	Percent variable
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	(millions)		(millions)			(millions)			(thousands)			(thousands)		
							Southern District							
1929	231,506	-	94,252	-	-	5,789	-	-	126,772	-	-	7,714	-	-
1930	205,728	- 11.13	83,787	- 11.10	99.73	5,165	- 10.78	96.86	113,609	- 10.38	93.26	6,949	- 9.92	89.13
1931	173,639	- 15.60	69,525	- 17.02	109.10	4,397	- 14.88	85.38	99,560	- 12.37	79.29	5,919	- 14.82	95.00
1932	135,811	- 21.79	54,477	- 21.64	99.31	3,439	- 21.78	89.95	81,038	- 18.60	85.36	4,595	- 22.37	102.66
1933	145,335	+ 7.01	58,934	+ 8.18	116.69	3,650	+ 6.15	87.73	83,239	+ 2.72	38.80	4,571	- .51	Inverse
1934	154,045	+ 5.99	62,367	+ 5.83	97.16	3,860	+ 5.74	95.83	87,932	+ 5.64	94.16	4,815	+ 5.34	89.15
1935	157,753	+ 2.41	65,152	+ 4.47	185.48	3,885	+ .64	26.56	88,642	+ .81	33.61	4,781	- .71	Inverse
1936	185,310	+ 17.47	78,314	+ 20.20	115.63	4,468	+ 15.01	85.92	100,551	+ 13.44	76.93	5,453	+ 14.06	80.48
1937	192,610	+ 3.94	81,846	+ 4.51	114.47	4,650	+ 4.07	103.30	103,135	+ 2.59	65.74	5,716	+ 4.81	122.08
1938	167,661	- 12.95	68,341	- 16.50	127.41	4,127	- 11.26	86.95	90,339	- 12.42	95.91	5,025	- 12.09	93.36
1939	186,178	+ 11.04	77,660	+ 13.64	123.55	4,511	+ 9.33	84.51	96,384	+ 6.69	60.60	5,421	+ 7.88	71.38
1940	206,287	+ 10.80	87,884	+ 13.17	121.94	4,939	+ 9.48	87.78	102,804	+ 6.66	61.67	5,926	+ 9.32	86.30
Median	-	-	-	-	115.63	-	-	87.78	-	-	76.93	-	-	89.13
							Western District							
1929	451,779	-	160,736	-	-	12,111	-	-	260,667	-	-	16,958	-	-
1930	402,372	- 10.94	139,130	- 13.44	122.85	10,626	- 10.59	96.80	230,625	- 11.53	105.39	14,685	- 13.40	122.49
1931	332,243	- 17.43	111,044	- 20.19	115.63	9,030	- 16.60	95.24	197,698	- 14.28	81.93	11,949	- 18.63	106.68
1932	258,705	- 22.13	80,923	- 27.13	122.59	7,106	- 21.28	96.16	171,065	- 13.47	60.67	9,463	- 20.81	94.04
1933	266,161	+ 2.88	85,727	+ 5.94	206.25	7,202	+ 1.32	45.33	170,366	- .41	Inverse	9,319	- 1.52	Inverse
1934	298,303	+ 12.06	94,063	+ 9.75	80.71	8,111	+ 12.61	104.39	186,780	+ 9.63	79.92	10,195	+ 9.41	77.90
1935	312,390	+ 4.72	100,256	+ 6.56	138.98	8,315	+ 2.52	53.39	192,804	+ 3.23	68.43	10,480	+ 2.79	59.11
1936	368,498	+ 17.96	122,730	+ 22.42	124.83	9,589	+ 15.33	85.36	219,061	+ 13.62	75.84	12,234	+ 16.74	93.21
1937	392,953	+ 6.64	133,157	+ 8.50	126.01	10,152	+ 5.87	88.40	228,372	+ 4.25	64.01	13,088	+ 6.98	105.12
1938	338,162	- 13.94	110,710	- 16.86	120.95	8,760	- 13.71	96.35	195,075	- 14.58	104.59	11,092	- 15.25	109.40
1939	366,707	+ 8.44	121,868	+ 10.08	119.43	9,383	+ 7.11	84.24	202,998	+ 4.06	48.10	11,809	+ 6.46	76.54
1940	397,917	+ 8.51	134,643	+ 10.48	123.15	10,134	+ 8.00	94.01	212,829	+ 4.84	56.67	12,546	+ 6.24	73.33
Median	-	-	-	-	122.65	-	-	94.01	-	-	68.43	-	-	93.21

- Decrease.
+ Increase.

Source: Gross ton-miles--Cars, contents, and cabooses from ICC Statement M-211, item 6-05. Revenue net ton-miles from ICC Statistics of Railways in the United States, Table 44. Car-miles--Loaded, empty, and caboose from ICC Statement M-211, item 4-09, plus item 4-10. Train miles from ICC Statement M-211, item 2-03. Yard switching locomotive hours for years 1929-1939 from Statistics of Railways in the United States, Table 15S (locomotive-miles ÷ 6). For the year 1940 from ICC Statement M-215, item 1-06. Switching and terminal companies excluded from total on basis of data appearing in working papers of Bureau of Statistics.

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APPENDIX D

Table 2.—Percent by Which Selected Freight Service Expenses Vary with Changes in Gross Ton-miles for Class I Railways for the United States and Districts - Years 1935-1939

Year	Gross ton-miles - Cars, contents, and cabooses		Transportation - Rail line															
			Account 371 - Superintendence			Account 372 - Dispatching trains			Account 373 - Station employees			Accounts 377-387 and 389 - Yard expenses excluding enginehouse expenses			Accounts 392-399, 401 and 402 - Train service expenses excluding enginehouse expenses		
	Number	Percent change over preceding year	Adjusted expense	Percent change over preceding year	Percent variable	Adjusted expense	Percent change over preceding year	Percent variable	Adjusted expense	Percent change over preceding year	Percent variable 1/	Adjusted expense	Percent change over preceding year	Percent variable	Adjusted expense	Percent change over preceding year	Percent variable
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	(millions)		(thous.)			(thous.)			(thous.)			(thous.)			(thous.)		
UNITED STATES																	
1935	767.517	-	$30,215	-	-	$10,936	-	-	$132,459	-	-	$214,581	-	-	$376,858	-	-
1936	896,762	+ 16.84	31,828	+ 5.34	31.71	15,186	+ 38.86	230.76	145,268	+ 9.67	57.42	247,155	+ 15.18	90.14	436,995	+ 15.96	94.77
1937	946,156	+ 5.51	33,347	+ 4.78	86.75	16,199	+ 6.67	121.05	153,424	+ 5.61	101.81	261,250	+ 5.70	103.45	455,307	+ 4.19	76.04
1938	794,421	- 16.04	29,965	- 11.02	68.70	15,035	- 7.19	44.83	136,740	- 10.87	67.77	215,953	- 17.34	108.10	377,189	- 17.16	106.98
1939	889,679	+ 11.99	29,970	+ .02	.17	15,430	+ 2.63	21.93	139,600	+ 2.09	17.43	236,118	+ 9.34	77.90	408,764	+ 8.37	69.81
Median	-	-	-	-	50.21	-	-	82.94	-	-	62.60	-	-	96.80	-	-	85.41
EASTERN DISTRICT																	
1935	297,374	-	15,029	-	-	4,882	-	-	57,225	-	-	107,016	-	-	147,878	-	-
1936	342,954	+ 15.33	15,610	+ 3.87	25.24	6,890	+ 41.14	268.36	61,418	+ 7.33	47.81	123,846	+ 15.73	102.61	171,124	+ 15.72	102.54
1937	360,953	+ 5.14	16,339	+ 4.67	90.86	7,226	+ 4.87	94.75	65,413	+ 6.50	126.46	129,692	+ 4.72	91.83	174,234	+ 1.82	35.41
1938	288,599	- 19.97	14,300	- 13.33	66.75	6,600	- 8.66	43.37	56,082	- 14.26	71.41	101,736	- 21.56	107.96	133,216	- 20.67	103.51
1939	336,795	+ 16.70	14,232	- .48	Inv. 2.87	6,815	+ 3.26	19.52	58,047	+ 3.50	20.96	115,070	+ 13.11	78.50	156,356	+ 13.12	78.56
Median	-	-	-	-	46.00	-	-	69.06	-	-	59.61	-	-	97.22	-	-	90.55
SOUTHERN DISTRICT																	
1935	157,753	-	5,693	-	-	2,562	-	-	23,559	-	-	35,096	-	-	67,698	-	-
1936	185,310	+ 17.47	5,936	+ 5.[illegible]	29.36	3,411	+ 33.13	139.64	25,912	+ 9.99	57.18	39,346	+ 12.11	69.32	78,087	+ 15.35	87.86
1937	192,610	+ 3.94	6,108	+ 2.05	52.03	3,579	+ 4.93	125.13	27,319	+ 5.43	137.82	41,370	+ 5.14	130.46	81,119	+ 3.88	98.48
1938	167,661	- 12.95	5,652	- 7.38	64.71	3,439	- 3.93	30.35	24,801	- 9.21	71.12	36,473	- 11.84	91.43	70,025	- 13.63	105.64
1939	186,178	+ 11.04	5,701	+ .85	7.97	3,490	+ 1.50	13.59	25,075	+ 1.10	9.96	39,257	+ 7.63	69.11	75,223	+ 7.42	67.21
Median	-	-	-	-	40.70	-	-	77.74	-	-	64.15	-	-	80.38	-	-	93.17
WESTERN DISTRICT																	
1935	312,390	-	9,493	-	-	3,492	-	-	51,676	-	-	72,470	-	-	161,282	-	-
1936	368,498	+ 17.96	10,232	+ 7.78	43.32	4,885	+ 39.90	222.16	57,938	+ 12.12	67.48	83,962	+ 15.86	88.31	187,783	+ 16.43	91.48
1937	392,953	+ 6.64	10,899	+ 6.52	98.19	5,394	+ 10.42	156.93	60,692	+ 4.75	71.54	90,188	+ 7.41	111.60	199,954	+ 6.48	97.59
1938	333,162	- 13.94	10,013	- 9.03	64.78	4,997	- 7.37	52.87	55,857	- 7.97	57.17	77,744	- 13.80	99.00	168,948	- 15.51	111.26
1939	366,707	+ 8.44	10,037	+ .24	2.34	5,125	+ 2.57	30.45	56,479	+ 1.11	13.15	81,791	+ 5.21	61.73	177,185	+ 4.38	57.32
Median	-	-	-	-	54.05	-	-	104.90	-	-	62.33	-	-	93.66	-	-	94.54

- Decrease + Increase

(Continued)

See page 121 for footnotes.

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Table 2.--Percent by Which Selected Freight Service Expenses Vary with Changes in Gross Ton-miles for Class I Railways for the United States and Districts - Years 1935-1939 - Continued

Year	Transportation - Rail line - Continued: Accounts 388 and 400 - Engine-house expenses, yard and train: Adjusted expenses	Percent change over preceding year	Percent variable	Accounts 371-420 - Total transportation: Adjusted expenses 2/	Percent change over preceding year	Percent variable	Accounts 351-359 - Traffic expenses: Adjusted expenses 3/	Percent change over preceding year	Percent variable	Accounts 451-462, excluding 457 - General expenses, excluding pensions: Adjusted expenses 4/	Percent change over preceding year	Percent variable
(1)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
	(thous.)			(thous.)			(thous.)			(thous.)		
UNITED STATES												
1935	$40,580	-	-	$917,646	-	-	$62,750	-	-	$89,581	-	-
1936	44,510	+ 9.68	57.48	1,047,174	+ 14.12	83.85	65,596	+ 4.54	26.96	93,574	+ 4.46	26.48
1937	48,416	+ 8.78	159.35	1,102,975	+ 5.33	96.73	68,017	+ 3.69	66.97	98,093	+ 4.33	87.66
1938	42,985	- 11.22	69.95	936,768	- 15.07	93.95	65,199	- 4.09	25.50	90,536	- 7.66	47.76
1939	44,357	+ 3.19	26.61	995,457	+ 6.59	54.96	66,255	+ 1.62	13.51	91,353	+ .90	7.51
Median	-	-	63.72	-	-	83.90	-	-	26.23	-	-	37.12
EASTERN DISTRICT												
1935	13,224	-	-	413,139	-	-	25,067	-	-	36,472	-	-
1936	19,972	+ 9.59	62.56	460,939	+ 13.75	89.69	25,682	+ 2.45	15.98	37,856	+ 3.80	24.79
1937	21,534	+ 7.82	152.14	489,569	+ 4.20	81.71	26,539	+ 3.34	64.98	39,271	+ 3.74	72.76
1938	18,541	- 13.90	69.60	400,587	- 18.19	91.09	25,225	- 4.89	24.49	35,946	- 8.42	42.16
1939	19,588	+ 5.65	33.33	440,410	+ 9.94	59.52	25,393	+ .66	3.95	35,930	- .05	Inv. .30
Median	-	-	66.03	-	-	85.	-	-	20.84	-	-	33.48
SOUTHERN DISTRICT												
1935	7,629	-	-	156,513	-	-	13,375	-	-	17,476	-	-
1936	8,258	+ 8.25	47.22	176,259	+ 12.61	72.13	14,193	+ 6.11	34.97	18,336	+ 4.92	28.16
1937	8,935	+ 8.19	207.57	185,298	+ 5.07	127.71	14,586	+ 2.77	70.30	19,514	+ 6.43	163.20
1938	8,317	- 6.92	53.44	164,316	- 11.32	37.41	14,040	- 3.70	28.57	18,105	- 7.17	55.37
1939	8,412	+ 1.14	10.33	173,007	+ 5.29	47.92	14,407	+ 2.62	23.73	18,397	+ 1.61	14.58
Median	-	-	50.33	-	-	79.80	-	-	31.77	-	-	41.77
WESTERN DISTRICT												
1935	14,727	-	-	347,989	-	-	24,309	-	-	35,633	-	-
1936	16,280	+ 10.54	53.69	400,977	+ 15.23	84.80	25,722	+ 5.31	32.35	37,382	+ 4.91	27.34
1937	17,947	+ 10.24	154.22	428,018	+ 6.74	101.51	26,893	+ 4.55	68.52	39,309	+ 5.16	77.71
1938	16,128	- 10.14	72.74	371,365	- 13.12	94.12	25,934	- 3.51	25.13	36,434	- 7.13	51.15
1939	16,357	+ 1.14	13.51	385,040	+ 3.54	41.94	26,455	+ 2.01	23.82	37,027	+ 1.49	17.65
Median	-	-	65.72	-	-	89.46	-	-	28.77	-	-	39.25

- Decrease + Increase

See page 121 for footnotes.

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Footnotes for Table 2, Appendix D

1/ Because of the wide variation shown in the percent variable for station employees and in view of the significance of this account, the study was continued to reflect the experience of 1940 from data appearing in each Class I carrier's annual report. The percent variable for the United States was found to be 22.61% and the 1935-1940 median 57.42%.

2/ The adjustments for wage changes were made to the following accounts, based on the indices shown in Table 3: Accounts 371, 372, 373, 377, 378, 379, 380, 381, 388 (hostlers and hostler helpers), 392, 393, 400 (hostlers and hostler helpers), and 401. The adjustments for fuel price changes were made to the following accounts, based on the indices appearing in Table 3: Accounts 382, 383, 384, 394, 395, and 396. For lack of information no adjustment was made on the remaining accounts.

3/ The traffic expenses were adjusted by computing the ratio of the adjusted general expenses, excluding pensions, for each year to the unadjusted general expenses, excluding pensions. The unadjusted traffic expenses for each year were then multiplied by the ratio so developed. The ratios computed for the years 1935-1939 were, respectively, 100.95, 100.00, 97.97, 95.28, 95.32.

4/ The adjustments for wage changes were made to accounts 451 and 452, based on the indices shown in Table 3. No other adjustments were made. Pensions were excluded because of the distortion in the expenses occasioned by the revision of the pension program during the period of study.

Source: Gross ton-miles--Cars, contents and cabooses are from Freight Train Performance of Class I Steam Railways in the United States, Statement M-211. Adjusted expenses are based on those assigned and apportioned to freight service as shown in Operating Revenues and Operating Expenses by Class of Service, Class I Steam Railways in the United States for the years 1935 and 1936, and as shown in the Preliminary Abstract of Railway Statistics for the years 1937-1939, inclusive, and on the wage scale and fuel price adjustments indicated by Table 3.

Table 3.- Indices Used in Adjusting Expenses for Changes in Wage Rates and Fuel Prices, Class I Steam Railways, 1935-1939
(1936 = 100)

Account No.	Employee group	1935	1936	1937	1938	1939
371	Superintendence 1/	98.75	100.0	102.49	105.97	105.97
372	Dispatching trains	98.75	100.0	100.0	100.0	100.0
373	Station employees 2/	98.75	100.0	103.39	108.14	108.14
377	Yardmasters and yard clerks 3/	98.75	100.0	102.36	106.25	106.25
378	Yard conductors and brakemen	98.75	100.0	101.62	106.48	106.48
379	Yard switching signal tenders	98.75	100.0	102.14	108.55	108.55
380-381	Yard enginemen and motormen	98.75	100.0	101.64	106.57	106.57
382-383, 384	Yard switching fuel:					
	Eastern District	99.67	100.0	103.10	105.14	108.40
	Southern District	99.43	100.0	105.37	110.23	109.37
	Western District	97.47	100.0	107.46	106.36	100.57
392,393	Train enginemen and motormen	98.75	100.0	101.49	105.97	105.97
394,395, 396	Train fuel	See yard switching fuel				
401	Trainmen	98.75	100.0	~~101.68~~ 101.86	~~106.74~~ 107.43	~~106.74~~ 107.43
388,400	Enginehouse expenses, yard and train (hostlers and hostler helpers) 4/	98.75	100.0	101.94	107.74	107.74
451	Salaries and expenses of general officers 5/	98.75	100.0	102.23	105.35	105.35
452	Salaries and expenses of clerks and attendants 6/	98.75	100.0	102.91	106.98	106.98

1/ Index based on divisions 1-26, incl., reported in Wage Statistics of class I Steam Railways, Statement No. M-300.
2/ Index based in divisions 78-82, incl., 84-92, incl., and 94.
3/ Separate indices were computed for yardmasters and assistants and yard clerks. A weighted average was taken in computing the combined index for both. Index for yardmasters based on divisions 105 and 106. Index for assistants and yard clerks based on divisions ~~3, 5-26~~ 4-26, incl.
4/ Index based on divisions 108-110.
5/ Index based on division 1.
6/ Index based on divisions 4-26, incl.

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APPENDIX E

Definitions of the Switching Terms Used in the Study 1/

1. Carrier terminal switching is a primary class of transportation switching service which includes all the elements of switching performed at origin and destination terminals by the initial and final line-haul carriers.

2. Connection terminal switching is a primary class of transportation switching service which includes all the elements of switching performed at origin and destination terminals by carriers, which as to the particular traffic (1) do not provide line-haul service, and (2) do not provide intermediate switching service.

3. Interchange switching is a primary class of transportation switching service which includes all the elements of switching performed in taking cars from the road train of one line-haul carrier and placing them in the road train of another line-haul carrier in the same terminal district except that it excludes intermediate switching, if any. 2/

4. Intermediate switching is a primary class of transportation switching service which includes all the elements of switching performed by a carrier which neither originates nor terminates the shipment nor performs a line haul on that shipment, the extent of the carrier's participation in the movement being only that of a connection between two other carriers.

5. Interterminal switching is a primary class of transportation switching service performed in handling a car from a track served by a carrier to a track served by another carrier when both tracks are within the switching limits of the same station or industrial switching district.

6. Intertrain switching is a primary class of transportation switching service which includes all the elements of switching performed in taking a car out of a train and placing it in another train of the same carrier at the same station or terminal.

1/ From Sioux City Terminal Railway Switching, 241 I.C.C. 53, 90.
2/ For the purpose of this study, a separate count is given to the cars handled by each carrier participating in the interchange switching service.

7. Intraterminal switching is a primary class of transportation switching service performed in handling a car from a track served by a carrier to another track served by the same carrier when both tracks are within the switching limits of the same station or industrial switching district.

8. Intratrain switching is a primary class of transportation switching service which includes all the elements of switching performed in taking a car out of a train and replacing it either in the same or another position in that train.

EXHIBIT 3

INTERSTATE COMMERCE COMMISSION
BUREAU OF STATISTICS

—o—

RAILROAD FREIGHT SERVICE COSTS IN THE VARIOUS RATE TERRITORIES

1939

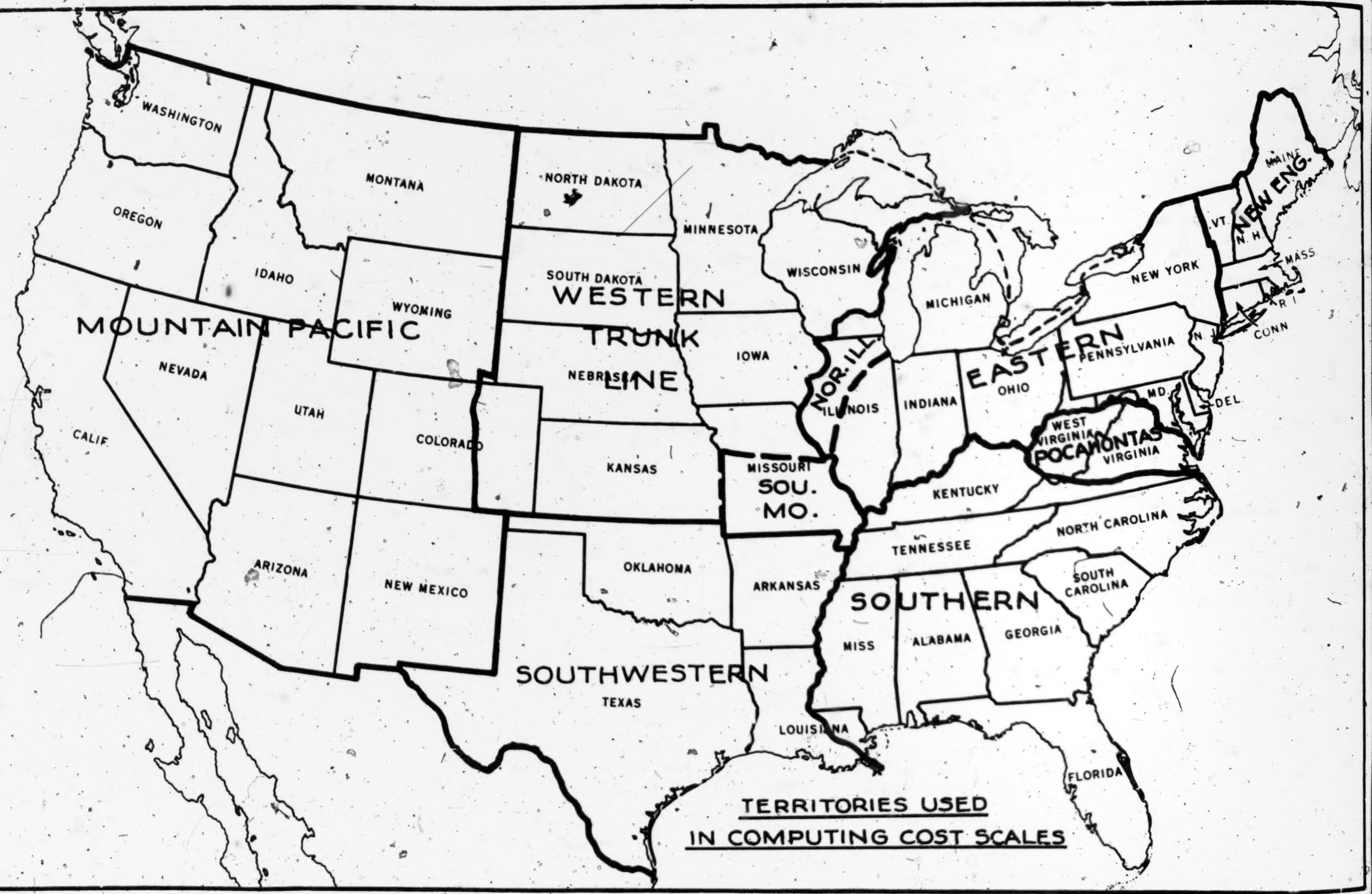
—o—

COST SCALES BY TERRITORIES AND CLASSES OF EQUIPMENT

—o—

PREPARED UNDER THE DIRECTION OF
FORD K. EDWARDS,
PRINCIPAL ECONOMIST IN CHARGE OF COST SECTION

WASHINGTON, D.C., MAY, 1941


WASHINGTON
OREGON
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MONTANA
IDAHO
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ARIZONA
NEW MEXICO
NORTH DAKOTA
SOUTH DAKOTA
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ILLINOIS
MICHIGAN
INDIANA
OHIO
KENTUCKY
TENNESSEE
MISS
ALABAMA
GEORGIA
FLORIDA
SOUTH CAROLINA
NORTH CAROLINA
VIRGINIA
WEST VIRGINIA
PENNSYLVANIA
NEW YORK
MAINE
VT
N H
MASS
R I
CONN
N J
MD.
DEL
MOUNTAIN
PACIFIC
WESTERN
TRUNK
LINE
NOR. ILL.
EASTERN
POCAHONTAS
SOU.
MO.
SOUTHERN
SOUTHWESTERN
NEW ENG.
TERRITORIES USED
IN COMPUTING COST SCALES

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1/ See Text, Chapter II, for Description of Territories.

Territory No. 1 - New England

BOX CARS

TABLE 1.—TERRITORY NO. 1 - NEW ENGLAND

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	21.0	17.5	15.0	13.1	11.7	10.5	9.6	8.8	8.1	7.6	7.1	6.6	6.2	5.9	5.6	5.3	5.1	4.8	4.6	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2	10
20	22.1	18.4	15.8	13.9	12.4	11.1	10.2	9.3	8.6	8.0	7.5	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	20
30	23.2	19.4	16.7	14.6	13.0	11.8	10.7	9.9	9.1	8.5	7.9	7.5	7.1	6.7	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	30
40	24.3	20.3	17.5	15.4	13.7	12.4	11.3	10.4	9.6	9.0	8.4	7.9	7.5	7.1	6.7	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.9	4.7	4.5	4.4	4.3	4.2	4.0	3.9	40
50	25.4	21.3	18.3	16.1	14.4	13.0	11.9	10.9	10.1	9.4	8.8	8.3	7.9	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.4	4.3	4.2	50
60	26.5	22.2	19.1	16.8	15.0	13.6	12.4	11.4	10.6	9.9	9.3	8.7	8.3	7.8	7.5	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.8	4.7	4.6	4.5	60
70	27.7	23.2	20.0	17.6	15.7	14.2	13.0	12.0	11.1	10.4	9.7	9.2	8.7	8.2	7.8	7.5	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.6	5.4	5.2	5.1	5.0	4.8	4.7	70
80	28.8	24.1	20.8	18.3	16.4	14.8	13.5	12.5	11.6	10.8	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.7	5.5	5.4	5.2	5.1	5.0	80
90	29.9	25.1	21.6	19.0	17.0	15.4	14.1	13.0	12.1	11.3	10.6	10.0	9.5	9.0	8.6	8.2	7.9	7.5	7.3	7.0	6.8	6.5	6.3	6.1	6.0	5.8	5.6	5.5	5.4	5.2	90
100	31.0	26.0	22.4	19.8	17.7	16.0	14.7	13.5	12.6	11.8	11.1	10.4	9.9	9.4	9.0	8.6	8.2	7.9	7.6	7.3	7.1	6.8	6.6	6.4	6.2	6.1	5.9	5.8	5.6	5.5	100
120	33.2	27.9	24.1	21.2	19.0	17.3	15.8	14.6	13.6	12.7	11.9	11.3	10.7	10.2	9.7	9.3	8.9	8.6	8.2	7.9	7.7	7.4	7.2	7.0	6.8	6.6	6.4	6.3	6.1	6.0	120
140	35.4	29.8	25.8	22.7	20.4	18.5	16.9	15.7	14.6	13.6	12.8	12.1	11.5	10.9	10.4	10.0	9.6	9.2	8.9	8.6	8.3	8.0	7.8	7.6	7.4	7.2	7.0	6.8	6.7	6.5	140
160	37.7	31.7	27.4	24.2	21.7	19.7	18.1	16.7	15.6	14.6	13.7	13.0	12.3	11.7	11.2	10.7	10.3	9.9	9.5	9.2	8.9	8.6	8.4	8.1	7.9	7.7	7.5	7.3	7.2	7.0	160
180	39.9	33.6	29.1	25.7	23.0	20.9	19.2	17.8	16.5	15.5	14.6	13.8	13.1	12.5	11.9	11.4	11.0	10.6	10.2	9.9	9.5	9.2	9.0	8.7	8.5	8.3	8.1	7.9	7.7	7.5	180
200	42.1	35.5	30.7	27.1	24.4	22.1	20.3	18.8	17.5	16.4	15.5	14.7	13.9	13.3	12.7	12.2	11.7	11.2	10.8	10.5	10.2	9.8	9.6	9.3	9.1	8.8	8.6	8.4	8.2	8.0	200
220	44.4	37.4	32.4	28.6	25.7	23.4	21.5	19.9	18.5	17.4	16.4	15.5	14.7	14.0	13.4	12.8	12.4	11.9	11.5	11.1	10.8	10.4	10.2	9.9	9.6	9.4	9.1	8.9	8.7	8.6	220
240	46.6	39.3	34.0	30.1	27.0	24.6	22.6	20.9	19.5	18.3	17.3	16.3	15.5	14.8	14.2	13.6	13.1	12.6	12.2	11.8	11.4	11.1	10.7	10.4	10.2	9.9	9.7	9.5	9.3	9.1	240
260	48.8	41.1	35.7	31.6	28.4	25.8	23.7	22.0	20.5	19.2	18.1	17.2	16.3	15.6	14.9	14.3	13.8	13.3	12.8	12.4	12.0	11.7	11.3	11.0	10.7	10.5	10.2	10.0	9.8	9.6	260
280	51.0	43.0	37.3	33.0	29.7	27.0	24.9	23.0	21.5	20.1	19.0	18.0	17.1	16.4	15.7	15.0	14.5	13.9	13.5	13.0	12.6	12.3	11.9	11.6	11.3	11.0	10.8	10.5	10.3	10.1	280
300	53.3	44.9	39.0	34.5	31.0	28.3	26.0	24.1	22.5	21.1	19.9	18.9	18.0	17.1	16.4	15.7	15.2	14.6	14.1	13.7	13.2	12.9	12.5	12.2	11.9	11.6	11.3	11.1	10.8	10.6	300
320	55.5	46.8	40.6	36.0	32.4	29.5	27.1	25.1	23.5	22.0	20.8	19.7	18.8	17.9	17.2	16.5	15.8	15.3	14.8	14.3	13.9	13.5	13.1	12.7	12.4	12.1	11.8	11.6	11.3	11.1	320
340	57.7	48.7	42.3	37.5	33.7	30.7	28.2	26.2	24.5	23.0	21.7	20.6	19.6	18.7	17.9	17.2	16.5	16.0	15.4	14.9	14.5	14.1	13.7	13.3	13.0	12.7	12.4	12.1	11.9	11.6	340
360	60.0	50.6	43.9	38.9	35.0	31.9	29.4	27.2	25.5	23.9	22.6	21.4	20.4	19.4	18.6	17.9	17.2	16.6	16.1	15.6	15.1	14.7	14.3	13.9	13.6	13.2	12.9	12.6	12.4	12.1	360
380	62.2	52.5	45.6	40.4	36.4	33.1	30.5	28.3	26.4	24.8	23.5	22.3	21.2	20.2	19.4	18.6	17.9	17.3	16.7	16.2	15.7	15.3	14.9	14.5	14.1	13.8	13.5	13.2	12.9	12.6	380
400	64.4	54.4	47.2	41.9	37.7	34.4	31.6	29.4	27.4	25.8	24.3	23.1	22.0	21.0	20.1	19.3	18.6	18.0	17.4	16.8	16.3	15.9	15.4	15.0	14.7	14.3	14.0	13.7	13.4	13.2	400
420	66.6	56.3	48.9	43.3	39.0	35.6	32.8	30.4	28.4	26.7	25.2	23.9	22.8	21.8	20.9	20.1	19.3	18.6	18.0	17.5	17.0	16.5	16.0	15.6	15.2	14.9	14.6	14.2	13.9	13.7	420
440	68.9	58.2	50.5	44.8	40.4	36.8	33.9	31.3	29.4	27.6	26.1	24.8	23.6	22.6	21.6	20.8	20.0	19.3	18.7	18.1	17.6	17.1	16.6	16.2	15.8	15.4	15.1	14.8	14.5	14.2	440
460	71.1	60.1	52.2	46.3	41.7	38.0	35.0	32.5	30.4	28.6	27.0	25.6	24.4	23.3	22.4	21.5	20.7	20.0	19.3	18.7	18.2	17.7	17.2	16.8	16.4	16.0	15.6	15.3	15.0	14.7	460
480	73.3	62.0	53.8	47.8	43.0	39.3	36.2	33.6	31.4	29.5	27.9	26.5	25.2	24.1	23.1	22.2	21.4	20.7	20.0	19.4	18.8	18.3	17.8	17.4	16.9	16.5	16.2	15.8	15.5	15.2	480
500	75.5	63.9	55.5	49.2	44.4	40.5	37.3	34.6	32.4	30.5	28.8	27.3	26.0	24.9	23.9	22.9	22.1	21.3	20.6	20.0	19.4	18.9	18.4	17.9	17.5	17.1	16.7	16.4	16.0	15.7	500
600	86.7	73.3	63.8	56.6	51.0	46.6	42.9	39.9	37.3	35.1	33.2	31.5	30.1	28.8	27.6	26.5	25.6	24.7	23.9	23.2	22.5	21.9	21.3	20.8	20.3	19.8	19.4	19.0	18.6	18.3	600
700	97.8	82.8	72.0	64.0	57.7	52.7	48.6	45.2	42.3	39.8	37.6	35.8	34.1	32.6	31.3	30.1	29.1	28.1	27.2	26.4	25.6	24.9	24.3	23.7	23.1	22.6	22.1	21.7	21.2	20.8	700
800	109.0	92.2	80.3	71.3	64.4	58.8	54.2	50.4	47.2	44.5	42.1	40.0	38.1	36.5	35.0	33.7	32.5	31.4	30.4	29.5	28.7	27.9	27.2	26.6	25.9	25.4	24.8	24.3	23.8	23.4	800
900	120.1	101.7	88.6	78.7	71.0	64.9	60.0	55.7	52.2	49.1	46.5	44.2	42.2	40.4	38.8	37.3	36.0	34.8	33.7	32.7	31.8	30.9	30.2	29.4	28.7	28.1	27.5	27.0	26.4	26.0	900
Term. 2/	19.854	16.545	14.181	12.409	11.030	9.927	9.025	8.273	7.636	7.091	6.618	6.204	5.839	5.515	5.225	4.964	4.727	4.512	4.316	4.136	3.971	3.818	3.677	3.545	3.423	3.309	3.202	3.102	3.008	2.920	Term. 2/
L. H. 3/	.111380	.094617	.082643	.073663	.066678	.061090	.056518	.052708	.049485	.046721	.044327	.042231	.040382	.038739	.037268	.035945	.034748	.033659	.032665	.031754	.030916	.030142	.029426	.028761	.028141	.027563	.027023	.026516	.026039	.025591	L. H. 3/

1/ Based on a tare weight of 21.1 tons and a ratio of empty car miles to loaded car miles of 0.284. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes; plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.86.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 1 (Concluded).—TERRITORY NO. 1 - NEW ENGLAND

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	10
20	3.3	3.3	3.2	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	20
30	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	30
40	3.8	3.7	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	40
50	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.6	2.5	2.5	50
60	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.8	2.7	2.7	60
70	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.9	70
80	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	80
90	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	90
100	5.4	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	100
120	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	120
140	6.4	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.2	140
160	6.9	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	160
180	7.4	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	5.0	4.9	180
200	7.9	7.7	7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.4	5.3	5.3	200
220	8.4	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.8	5.7	5.7	220
240	8.9	8.7	8.5	8.4	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	240
260	9.4	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.6	6.5	6.5	6.4	260
280	9.9	9.7	9.5	9.3	9.2	9.0	8.9	8.7	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	7.0	6.9	6.8	6.8	280
300	10.4	10.2	10.0	9.8	9.7	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.3	8.2	8.1	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.3	7.3	7.2	7.1	300
320	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7	7.7	7.6	7.5	320
340	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.3	8.2	8.1	8.0	8.0	7.9	340
360	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.6	10.4	10.3	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.6	8.5	8.4	8.3	8.3	360
380	12.4	12.2	12.0	11.7	11.5	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	8.8	8.7	8.6	380
400	12.9	12.7	12.4	12.2	12.0	11.8	11.6	11.5	11.3	11.1	11.0	10.9	10.7	10.6	10.5	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.2	9.1	9.0	400
420	13.4	13.2	12.9	12.7	12.5	12.3	12.1	11.9	11.8	11.6	11.4	11.3	11.1	11.0	10.9	10.7	10.6	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.5	9.4	420
440	13.9	13.7	13.4	13.2	13.0	12.8	12.6	12.4	12.2	12.0	11.9	11.7	11.6	11.4	11.3	11.2	11.0	10.9	10.8	10.7	10.6	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.8	440
460	14.4	14.2	13.9	13.7	13.4	13.2	13.0	12.8	12.7	12.5	12.3	12.2	12.0	11.9	11.7	11.6	11.5	11.3	11.2	11.1	11.0	10.9	10.8	10.7	10.6	10.5	10.4	10.3	10.2	10.1	460
480	14.9	14.6	14.4	14.1	13.9	13.7	13.5	13.3	13.1	12.9	12.8	12.6	12.4	12.3	12.1	12.0	11.9	11.7	11.6	11.5	11.4	11.3	11.2	11.1	11.0	10.9	10.8	10.7	10.6	10.5	480
500	15.4	15.1	14.9	14.6	14.4	14.2	14.0	13.8	13.6	13.4	13.2	13.0	12.9	12.7	12.6	12.4	12.3	12.1	12.0	11.9	11.8	11.7	11.6	11.4	11.3	11.2	11.1	11.1	11.0	10.9	500
600	17.9	17.6	17.3	17.0	16.8	16.5	16.3	16.0	15.8	15.6	15.4	15.2	15.0	14.8	14.7	14.5	14.3	14.2	14.0	13.9	13.8	13.6	13.5	13.4	13.3	13.2	13.1	12.9	12.8	12.7	600
700	20.5	20.1	19.8	19.4	19.1	18.8	18.6	18.3	18.1	17.8	17.6	17.4	17.2	17.0	16.8	16.6	16.4	16.2	16.1	15.9	15.8	15.6	15.5	15.3	15.2	15.1	15.0	14.8	14.7	14.6	700
800	23.0	22.6	22.2	21.8	21.5	21.2	20.9	20.6	20.3	20.0	19.8	19.5	19.3	19.1	18.9	18.7	18.5	18.3	18.1	17.9	17.8	17.6	17.4	17.3	17.1	17.0	16.9	16.7	16.6	16.5	800
900	25.5	25.1	24.6	24.2	23.9	23.5	23.2	22.9	22.6	22.3	22.0	21.7	21.5	21.2	21.0	20.8	20.5	20.3	20.1	19.9	19.8	19.6	19.4	19.2	19.1	18.9	18.8	18.6	18.5	18.3	900
Term. 2/	2.836	2.758	2.683	2.612	2.545	2.482	2.421	2.364	2.309	2.256	2.206	2.158	2.112	2.068	2.026	1.985	1.946	1.909	1.873	1.838	1.805	1.773	1.742	1.712	1.683	1.655	1.627	1.601	1.576	1.551	Term. 2/
L. H. 3/	.025169	.024769	.024392	.024034	.023695	.023373	.023066	.022774	.022495	.022230	.021976	.021733	.021500	.021277	.021063	.020858	.020661	.020471	.020289	.020113	.019944	.019780	.019623	.019471	.019324	.019182	.019044	.018911	.018783	.018658	L. H. 3/

1/ Based on a tare weight of 21.1 tons and a ratio of empty car miles to loaded car miles of 0.284. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.86.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 1 - New England

FLAT CARS

TABLE 2.— TERRITORY NO. 1 - NEW ENGLAND

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	21.3	17.8	15.3	13.4	11.9	10.7	9.8	9.0	8.3	7.7	7.2	6.7	6.3	6.0	5.7	5.4	5.2	4.9	4.7	4.5	4.4	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	10
20	22.8	19.0	16.4	14.3	12.8	11.5	10.5	9.6	8.9	8.3	7.7	7.3	6.9	6.5	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.6	4.4	4.2	4.1	4.0	3.9	3.7	3.6	3.5	20
30	24.3	20.3	17.4	15.3	13.6	12.3	11.2	10.3	9.5	8.9	8.3	7.8	7.4	7.0	6.6	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.8	30
40	25.8	21.5	18.5	16.3	14.5	13.1	11.9	11.0	10.2	9.5	8.9	8.3	7.9	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.5	4.4	4.3	4.2	40
50	27.2	22.8	19.6	17.2	15.4	13.9	12.7	11.7	10.8	10.1	9.4	8.9	8.4	8.0	7.6	7.2	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.5	50
60	28.7	24.0	20.7	18.2	16.2	14.7	13.4	12.3	11.4	10.7	10.0	9.4	8.9	8.4	8.0	7.7	7.3	7.0	6.7	6.5	6.3	6.0	5.8	5.7	5.5	5.3	5.2	5.0	4.9	4.8	60
70	30.2	25.3	21.8	19.2	17.1	15.5	14.1	13.0	12.1	11.3	10.6	10.0	9.4	8.9	8.5	8.1	7.8	7.4	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.7	5.5	5.4	5.2	5.1	70
80	31.7	26.5	22.9	20.1	18.0	16.3	14.9	13.7	12.7	11.9	11.1	10.5	9.9	9.4	9.0	8.6	8.2	7.9	7.6	7.3	7.0	6.8	6.6	6.4	6.2	6.0	5.8	5.7	5.5	5.4	80
90	33.1	27.8	23.9	21.1	18.8	17.1	15.6	14.4	13.3	12.5	11.7	11.0	10.4	9.9	9.4	9.0	8.6	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.2	6.0	5.8	5.7	90
100	34.6	29.0	25.0	22.0	19.7	17.8	16.3	15.1	14.0	13.1	12.3	11.6	10.9	10.4	9.9	9.5	9.1	8.7	8.4	8.1	7.8	7.5	7.3	7.1	6.9	6.7	6.5	6.3	6.2	6.0	100
120	37.6	31.5	27.2	24.0	21.4	19.4	17.8	16.4	15.2	14.2	13.4	12.6	12.0	11.4	10.8	10.4	9.9	9.5	9.2	8.9	8.6	8.3	8.0	7.8	7.5	7.3	7.1	7.0	6.8	6.6	120
140	40.5	34.0	29.4	25.9	23.2	21.0	19.2	17.8	16.5	15.4	14.5	13.7	13.0	12.3	11.8	11.3	10.8	10.4	10.0	9.6	9.3	9.0	8.7	8.5	8.2	8.0	7.8	7.6	7.4	7.2	140
160	43.5	36.5	31.5	27.8	24.9	22.6	20.7	19.1	17.8	16.6	15.6	14.8	14.0	13.3	12.7	12.2	11.7	11.2	10.8	10.4	10.1	9.8	9.5	9.2	8.9	8.7	8.5	8.3	8.1	7.9	160
180	46.4	39.0	33.7	29.7	26.3	24.2	22.2	20.5	19.1	17.8	16.8	15.8	15.0	14.3	13.6	13.1	12.5	12.1	11.6	11.2	10.8	10.5	10.2	9.9	9.6	9.4	9.1	8.9	8.7	8.5	180
200	49.4	41.5	35.9	31.7	28.4	25.8	23.6	21.8	20.3	19.0	17.9	16.9	16.0	15.3	14.6	14.0	13.4	12.9	12.4	12.0	11.6	11.2	10.9	10.6	10.3	10.0	9.8	9.5	9.3	9.1	200
220	52.3	44.0	38.1	33.6	30.1	27.4	25.1	23.2	21.6	20.2	19.0	18.0	17.1	16.3	15.5	14.9	14.3	13.7	13.2	12.8	12.4	12.0	11.6	11.3	11.0	10.7	10.4	10.2	9.9	9.7	220
240	55.3	46.5	40.2	35.5	31.9	28.9	26.5	24.5	22.9	21.4	20.2	19.1	18.1	17.2	16.5	15.8	15.1	14.6	14.0	13.6	13.1	12.7	12.3	12.0	11.7	11.4	11.1	10.8	10.6	10.3	240
260	58.2	49.0	42.4	37.4	33.6	30.5	28.0	25.9	24.1	22.6	21.3	20.1	19.1	18.2	17.4	16.7	16.0	15.4	14.9	14.4	13.9	13.5	13.1	12.7	12.4	12.0	11.7	11.5	11.2	11.0	260
280	61.2	51.5	44.6	39.4	35.3	32.1	29.5	27.3	25.4	23.8	22.4	21.2	20.1	19.2	18.3	17.6	16.9	16.2	15.7	15.1	14.7	14.2	13.8	13.4	13.1	12.7	12.4	12.1	11.8	11.6	280
300	64.1	54.0	46.7	41.3	37.1	33.7	30.9	28.6	26.7	25.0	23.5	22.3	21.1	20.2	19.3	18.5	17.7	17.1	16.5	15.9	15.4	15.0	14.5	14.1	13.7	13.4	13.1	12.8	12.5	12.2	300
320	67.1	56.5	48.9	43.2	38.8	35.3	32.4	30.0	27.9	26.2	24.7	23.3	22.2	21.1	20.2	19.4	18.6	17.9	17.3	16.7	16.2	15.7	15.2	14.8	14.4	14.1	13.7	13.4	13.1	12.8	320
340	70.0	59.0	51.1	45.2	40.5	36.9	33.8	31.3	29.2	27.4	25.8	24.4	23.2	22.1	21.1	20.3	19.5	18.8	18.1	17.5	16.9	16.4	16.0	15.5	15.1	14.7	14.4	14.0	13.7	13.4	340
360	73.0	61.5	53.2	47.1	42.3	38.4	35.3	32.7	30.5	28.6	26.9	25.5	24.2	23.1	22.1	21.2	20.3	19.6	18.9	18.3	17.7	17.2	16.7	16.2	15.8	15.4	15.0	14.7	14.4	14.1	360
380	75.9	64.0	55.4	49.0	44.0	40.0	36.8	34.0	31.7	29.8	28.1	26.6	25.2	24.1	23.0	22.1	21.2	20.4	19.7	19.1	18.5	17.9	17.4	16.9	16.5	16.1	15.7	15.3	15.0	14.7	380
400	78.9	66.5	57.6	50.9	45.8	41.6	38.2	35.4	33.0	31.0	29.2	27.6	26.3	25.0	23.9	23.0	22.1	21.3	20.5	19.9	19.2	18.7	18.1	17.6	17.2	16.7	16.3	16.0	15.6	15.3	400
420	81.8	69.0	59.8	52.9	47.5	43.2	39.7	36.7	34.3	32.1	30.3	28.7	27.3	26.0	24.9	23.9	22.9	22.1	21.3	20.6	20.0	19.4	18.9	18.3	17.9	17.4	17.0	16.6	16.2	15.9	420
440	84.8	71.5	61.9	54.8	49.2	44.8	41.1	38.1	35.5	33.3	31.4	29.8	28.3	27.0	25.8	24.8	23.8	22.9	22.2	21.4	20.8	20.1	19.6	19.0	18.6	18.1	17.7	17.3	16.9	16.5	440
460	87.8	74.0	64.1	56.7	51.0	46.4	42.6	39.5	36.8	34.5	32.6	30.8	29.3	28.0	26.8	25.7	24.7	23.8	23.0	22.2	21.5	20.9	20.3	19.8	19.2	18.8	18.3	17.9	17.5	17.1	460
480	90.7	76.4	66.3	58.6	52.7	47.9	44.1	40.8	38.1	35.7	33.7	31.9	30.3	28.9	27.7	26.6	25.5	24.6	23.8	23.0	22.3	21.6	21.0	20.5	19.9	19.4	19.0	18.5	18.1	17.8	480
500	93.7	79.0	68.4	60.6	54.4	49.5	45.5	42.2	39.3	36.9	34.8	33.0	31.4	29.9	28.6	27.5	26.4	25.5	24.6	23.8	23.1	22.4	21.7	21.2	20.6	20.1	19.6	19.2	18.8	18.4	500
600	108.4	91.4	79.3	70.2	63.1	57.4	52.8	49.0	45.7	42.9	40.5	38.3	36.5	34.8	33.3	32.0	30.7	29.6	28.6	27.7	26.9	26.1	25.4	24.7	24.1	23.5	22.9	22.4	21.9	21.5	600
700	123.2	103.9	90.1	79.8	71.8	65.4	60.1	55.7	52.0	48.9	46.1	43.7	41.6	39.7	38.0	36.5	35.1	33.8	32.7	31.6	30.7	29.8	29.0	28.2	27.5	26.8	26.2	25.6	25.1	24.6	700
800	137.9	116.4	101.0	89.4	80.5	73.3	67.4	62.5	58.4	54.8	51.7	49.0	46.7	44.6	42.7	41.0	39.4	38.0	36.7	35.6	34.5	33.5	32.6	31.7	30.9	30.2	29.5	28.8	28.2	27.7	800
900	152.7	128.9	111.8	99.1	89.2	81.2	74.7	69.3	64.7	60.8	57.4	54.4	51.8	49.4	47.3	45.5	43.8	42.2	40.8	39.5	38.3	37.2	36.2	35.3	34.4	33.5	32.8	32.1	31.4	30.7	900
Term. 2/	19.854	16.545	14.181	12.409	11.030	9.927	9.025	8.273	7.636	7.091	6.618	6.204	5.839	5.515	5.225	4.964	4.727	4.512	4.316	4.136	3.971	3.818	3.677	3.545	3.423	3.309	3.202	3.102	3.008	2.920	Term. 2/
L. H. 3/	.147600	.124800	.108514	.096300	.086800	.079200	.072982	.067800	.063415	.059657	.056400	.053550	.051035	.048800	.046800	.045000	.043371	.041891	.040539	.039300	.038160	.037108	.036133	.035229	.034386	.033600	.032865	.032175	.031527	.030918	L. H. 3/

1/ Based on a tare weight of 19.5 tons and a ratio of empty car miles to loaded car miles of 0.827. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.86.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 2 (Concluded).—TERRITORY NO. 1 - NEW ENGLAND

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	10
20	3.4	3.4	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	20
30	3.7	3.7	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	30
40	4.0	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	40
50	4.4	4.2	4.1	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	50
60	4.7	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	60
70	5.0	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	70
80	5.3	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	80
90	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	90
100	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	100
120	6.5	6.3	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	120
140	7.1	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.0	5.9	5.8	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	4.6	140
160	7.7	7.5	7.4	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	5.0	160
180	8.3	8.1	8.0	7.8	7.6	7.5	7.4	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.7	5.6	5.5	5.5	5.4	180
200	8.9	8.7	8.5	8.4	8.2	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	200
220	9.5	9.3	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.3	220
240	10.1	9.9	9.7	9.5	9.3	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.8	6.7	240
260	10.7	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.8	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	260
280	11.3	11.1	10.9	10.7	10.5	10.3	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.1	9.0	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.8	7.7	7.6	7.6	280
300	11.9	11.7	11.5	11.3	11.0	10.9	10.7	10.5	10.3	10.2	10.0	9.9	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.0	300
320	12.5	12.3	12.1	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.8	8.7	8.6	8.5	8.4	320
340	13.2	12.9	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	340
360	13.8	13.5	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.7	11.6	11.4	11.2	11.1	10.9	10.8	10.7	10.5	10.4	10.3	10.2	10.1	10.0	9.8	9.7	9.6	9.6	9.5	9.4	9.3	360
380	14.4	14.1	13.8	13.6	13.3	13.1	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.6	11.4	11.3	11.1	11.0	10.9	10.8	10.6	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	380
400	15.0	14.7	14.4	14.1	13.9	13.6	13.4	13.2	13.0	12.8	12.6	12.4	12.3	12.1	11.9	11.8	11.6	11.5	11.4	11.2	11.1	11.0	10.9	10.7	10.6	10.5	10.4	10.3	10.2	10.1	400
420	15.6	15.3	15.0	14.7	14.4	14.2	14.0	13.7	13.5	13.3	13.1	12.9	12.8	12.6	12.4	12.3	12.1	12.0	11.8	11.7	11.6	11.4	11.3	11.2	11.1	11.0	10.9	10.8	10.7	10.6	420
440	16.2	15.9	15.6	15.3	15.0	14.8	14.5	14.3	14.1	13.8	13.6	13.5	13.3	13.1	12.9	12.8	12.6	12.4	12.3	12.2	12.0	11.9	11.8	11.7	11.5	11.4	11.3	11.2	11.1	11.0	440
460	16.8	16.5	16.2	15.9	15.6	15.3	15.1	14.8	14.6	14.4	14.2	14.0	13.8	13.6	13.4	13.2	13.1	12.9	12.8	12.6	12.5	12.4	12.2	12.1	12.0	11.9	11.8	11.6	11.5	11.4	460
480	17.4	17.1	16.7	16.4	16.1	15.9	15.6	15.4	15.1	14.9	14.7	14.5	14.3	14.1	13.9	13.7	13.6	13.4	13.3	13.1	13.0	12.8	12.7	12.6	12.4	12.3	12.2	12.1	12.0	11.9	480
500	18.0	17.7	17.3	17.0	16.7	16.4	16.2	15.9	15.7	15.4	15.2	15.0	14.8	14.6	14.4	14.2	14.1	13.9	13.7	13.6	13.4	13.3	13.1	13.0	12.9	12.8	12.6	12.5	12.4	12.3	500
600	21.0	20.6	20.3	19.9	19.5	19.2	18.9	18.6	18.3	18.1	17.8	17.6	17.3	17.1	16.9	16.7	16.5	16.3	16.1	15.9	15.7	15.6	15.4	15.3	15.1	15.0	14.8	14.7	14.6	14.4	600
700	24.1	23.6	23.2	22.8	22.4	22.0	21.7	21.3	21.0	20.7	20.4	20.1	19.9	19.6	19.4	19.1	18.9	18.7	18.5	18.3	18.1	17.9	17.7	17.5	17.4	17.2	17.0	16.9	16.7	16.6	700
800	27.1	26.6	26.1	25.7	25.2	24.8	24.4	24.0	23.7	23.3	23.0	22.7	22.4	22.1	21.8	21.6	21.3	21.1	20.8	20.6	20.4	20.2	20.0	19.8	19.6	19.4	19.2	19.1	18.9	18.7	800
900	30.1	29.6	29.0	28.5	28.0	27.6	27.2	26.7	26.3	26.0	25.6	25.3	24.9	24.6	24.3	24.0	23.7	23.5	23.2	23.0	22.7	22.5	22.3	22.0	21.8	21.6	21.4	21.2	21.1	20.9	900
Term. 2/	2.836	2.758	2.683	2.612	2.545	2.482	2.421	2.364	2.309	2.256	2.206	2.158	2.112	2.068	2.026	1.985	1.946	1.909	1.873	1.838	1.805	1.773	1.742	1.712	1.683	1.655	1.627	1.601	1.576	1.551	Term. 2/
L. H. 3/	.030343	.029800	.029286	.028800	.028338	.027900	.027483	.027086	.026707	.026345	.026000	.025670	.025353	.025050	.024759	.024480	.024212	.023954	.023706	.023467	.023236	.023014	.022800	.022593	.022393	.022200	.022013	.021832	.021657	.021488	L. H. 3/

1/ Based on a tare weight of 19.5 tons and a ratio of empty car miles to loaded car miles of 0.827. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.86.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 3.—TERRITORY NO. 1 - NEW ENGLAND

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	21.4	17.9	15.3	13.4	12.0	10.8	9.8	9.0	8.3	7.7	7.2	6.8	6.4	6.0	5.7	5.4	5.2	5.0	4.7	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.2	10
20	23.0	19.2	16.5	14.5	12.9	11.6	10.6	9.7	9.0	8.4	7.8	7.3	6.9	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	20
30	24.6	20.6	17.7	15.5	13.8	12.5	11.4	10.4	9.7	9.0	8.4	7.9	7.5	7.1	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.2	4.1	4.0	3.9	30
40	26.2	21.9	18.8	16.5	14.7	13.3	12.1	11.2	10.3	9.6	9.0	8.5	8.0	7.6	7.2	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.5	4.3	4.2	40
50	27.8	23.2	20.0	17.6	15.7	14.1	12.9	11.9	11.0	10.3	9.6	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.7	4.5	50
60	29.3	24.6	21.1	18.6	16.6	15.0	13.7	12.6	11.7	10.9	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.9	60
70	30.9	25.9	22.3	19.6	17.5	15.8	14.5	13.3	12.4	11.5	10.8	10.2	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.0	6.8	6.6	6.3	6.1	6.0	5.8	5.6	5.5	5.3	5.2	70
80	32.5	27.2	23.5	20.6	18.4	16.7	15.2	14.0	13.0	12.2	11.4	10.7	10.2	9.7	9.2	8.8	8.4	8.1	7.7	7.5	7.2	6.9	6.7	6.5	6.3	6.1	6.0	5.8	5.7	5.5	80
90	34.1	28.6	24.6	21.7	19.4	17.5	16.0	14.8	13.7	12.8	12.0	11.3	10.7	10.2	9.7	9.2	8.9	8.5	8.2	7.9	7.6	7.3	7.1	6.9	6.7	6.5	6.3	6.1	6.0	5.8	90
100	35.7	29.9	25.8	22.7	20.3	18.4	16.8	15.5	14.4	13.4	12.6	11.9	11.3	10.7	10.2	9.7	9.3	8.9	8.6	8.3	8.0	7.7	7.5	7.3	7.0	6.8	6.7	6.5	6.3	6.2	100
120	38.8	32.6	28.1	24.8	22.1	20.1	18.4	16.9	15.7	14.7	13.8	13.0	12.3	11.7	11.2	10.7	10.2	9.8	9.5	9.1	8.8	8.5	8.2	8.0	7.8	7.6	7.3	7.2	7.0	6.8	120
140	42.0	35.2	30.4	26.8	24.0	21.7	19.9	18.4	17.1	16.0	15.0	14.2	13.4	12.8	12.2	11.6	11.1	10.7	10.3	9.9	9.6	9.3	9.0	8.7	8.5	8.3	8.0	7.8	7.6	7.5	140
160	45.1	37.9	32.7	28.9	25.8	23.4	21.5	19.8	18.4	17.2	16.2	15.3	14.5	13.8	13.2	12.6	12.1	11.6	11.2	10.8	10.4	10.1	9.8	9.5	9.2	9.0	8.7	8.5	8.3	8.1	160
180	48.3	40.6	35.1	30.9	27.7	25.1	23.0	21.3	19.8	18.5	17.4	16.4	15.6	14.8	14.1	13.5	13.0	12.5	12.0	11.6	11.2	10.9	10.5	10.2	9.9	9.7	9.4	9.2	9.0	8.8	180
200	51.5	43.3	37.4	33.0	29.6	26.8	24.6	22.7	21.1	19.8	18.6	17.6	16.7	15.9	15.1	14.5	13.9	13.4	12.9	12.4	12.0	11.6	11.3	11.0	10.7	10.4	10.1	9.9	9.6	9.4	200
220	54.6	45.9	39.7	35.0	31.4	28.5	26.1	24.1	22.5	21.0	19.8	18.7	17.7	16.9	16.1	15.4	14.8	14.3	13.7	13.3	12.8	12.4	12.1	11.7	11.4	11.1	10.8	10.5	10.3	10.1	220
240	57.8	48.6	42.0	37.1	33.3	30.2	27.7	25.6	23.8	22.3	21.0	19.8	18.8	17.9	17.1	16.4	15.7	15.1	14.6	14.1	13.6	13.2	12.8	12.4	12.1	11.8	11.5	11.2	11.0	10.7	240
260	61.0	51.3	44.3	39.1	35.1	31.9	29.2	27.0	25.2	23.6	22.2	21.0	19.9	19.0	18.1	17.3	16.7	16.0	15.4	14.9	14.4	14.0	13.6	13.2	12.8	12.5	12.2	11.9	11.6	11.4	260
280	64.1	53.9	46.7	41.2	37.0	33.6	30.8	28.5	26.5	24.8	23.4	22.1	21.0	20.0	19.1	18.3	17.6	16.9	16.3	15.8	15.2	14.8	14.3	13.9	13.6	13.2	12.9	12.6	12.3	12.0	280
300	67.3	56.6	49.0	43.3	38.8	35.3	32.3	29.9	27.9	26.1	24.6	23.3	22.1	21.0	20.1	19.2	18.5	17.8	17.2	16.6	16.0	15.6	15.1	14.7	14.3	13.9	13.6	13.2	12.9	12.7	300
320	70.4	59.3	51.3	45.3	40.7	36.9	33.9	31.4	29.2	27.4	25.8	24.4	23.2	22.1	21.1	20.2	19.4	18.7	18.0	17.4	16.9	16.3	15.9	15.4	15.0	14.6	14.3	13.9	13.6	13.3	320
340	73.6	61.9	53.6	47.4	42.5	38.6	35.5	32.8	30.6	28.6	27.0	25.5	24.2	23.1	22.1	21.2	20.3	19.6	18.9	18.2	17.7	17.1	16.6	16.2	15.7	15.3	15.0	14.6	14.3	14.0	340
360	76.8	64.6	55.9	49.4	44.4	40.3	37.0	34.3	31.9	29.9	28.2	26.7	25.3	24.1	23.1	22.1	21.2	20.4	19.7	19.1	18.5	17.9	17.4	16.9	16.5	16.0	15.6	15.3	14.9	14.6	360
380	79.9	67.3	58.3	51.5	46.2	42.0	38.6	35.7	33.3	31.2	29.4	27.8	26.4	25.2	24.1	23.1	22.2	21.3	20.6	19.9	19.3	18.7	18.1	17.6	17.2	16.7	16.3	16.0	15.6	15.3	380
400	83.1	70.0	60.6	53.5	48.1	43.7	40.1	37.1	34.6	32.4	30.6	28.9	27.5	26.2	25.0	24.0	23.1	22.2	21.4	20.7	20.1	19.5	18.9	18.4	17.9	17.4	17.0	16.6	16.3	15.9	400
420	86.2	72.6	62.9	55.6	49.9	45.4	41.7	38.6	36.0	33.7	31.8	30.1	28.6	27.2	26.0	25.0	24.0	23.1	22.3	21.6	20.9	20.2	19.7	19.1	18.6	18.2	17.7	17.3	16.9	16.6	420
440	89.4	75.3	65.2	57.7	51.8	47.1	43.2	40.0	37.3	35.0	33.0	31.2	29.6	28.3	27.0	25.9	24.9	24.0	23.2	22.4	21.7	21.0	20.4	19.9	19.3	18.9	18.4	18.0	17.6	17.2	440
460	92.6	78.0	67.5	59.7	53.6	48.8	44.8	41.5	38.7	36.3	34.2	32.3	30.7	29.3	28.0	26.9	25.8	24.9	24.0	23.2	22.5	21.8	21.2	20.6	20.1	19.6	19.1	18.7	18.2	17.9	460
480	95.7	80.6	69.9	61.8	55.5	50.5	46.3	42.9	40.0	37.5	35.4	33.5	31.8	30.3	29.0	27.8	26.7	25.8	24.9	24.0	23.3	22.6	22.0	21.4	20.8	20.3	19.8	19.3	18.9	18.5	480
500	98.9	83.3	72.2	63.8	57.3	52.1	47.9	44.4	41.4	38.8	36.6	34.6	32.9	31.4	30.0	28.8	27.7	26.6	25.7	24.9	24.1	23.4	22.7	22.1	21.5	21.0	20.5	20.0	19.6	19.1	500
600	114.7	96.7	83.8	74.1	66.6	60.6	55.7	51.6	48.1	45.1	42.6	40.3	38.3	36.5	35.0	33.5	32.2	31.1	30.0	29.0	28.1	27.3	26.5	25.8	25.1	24.5	23.9	23.4	22.9	22.4	600
700	130.5	110.0	95.4	84.4	75.9	69.0	63.4	58.8	54.8	51.5	48.5	46.0	43.7	41.7	39.9	38.3	36.8	35.5	34.3	33.2	32.1	31.2	30.3	29.5	28.8	28.1	27.4	26.8	26.2	25.6	700
800	146.3	123.4	107.0	94.7	85.1	77.5	71.2	66.0	61.6	57.8	54.5	51.7	49.1	46.9	44.9	43.1	41.4	39.9	38.6	37.3	36.2	35.1	34.1	33.2	32.4	31.6	30.8	30.2	29.5	28.9	800
900	162.1	136.7	118.6	105.0	94.4	85.9	79.0	73.2	68.3	64.1	60.5	57.3	54.5	52.1	49.8	47.8	46.0	44.4	42.8	41.5	40.2	39.0	37.9	36.9	36.0	35.1	34.3	33.5	32.8	32.1	900
Term. 2/	19.854	16.545	14.181	12.409	11.030	9.927	9.025	8.273	7.636	7.091	6.618	6.204	5.839	5.515	5.225	4.964	4.727	4.512	4.316	4.136	3.971	3.818	3.677	3.545	3.423	3.309	3.202	3.102	3.008	2.920	Term. 2/
L. H. 3/	.158070	.133525	.115993	.102844	.092617	.084435	.077741	.072163	.067442	.063396	.059890	.056822	.054115	.051708	.049555	.047618	.045864	.044270	.042815	.041481	.040254	.039121	.038072	.037098	.036191	.035345	.034553	.033811	.033114	.032457	L. H. 3/

1/ Based on a tare weight of 21.1 tons and a ratio of empty car miles to loaded car miles of 0.886. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.86.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 3 (Concluded).—TERRITORY NO. 1 - NEW ENGLAND

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.2	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	10
20	3.5	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	20
30	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	30
40	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	40
50	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	50
60	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	60
70	5.1	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	70
80	5.4	5.3	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.3	80
90	5.7	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	90
100	6.0	5.9	5.8	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	100
120	6.7	6.5	6.4	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	120
140	7.3	7.1	7.0	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	4.7	140
160	7.9	7.8	7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.4	6.3	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	160
180	8.6	8.4	8.2	8.0	7.9	7.7	7.6	7.5	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.6	180
200	9.2	9.0	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	200
220	9.8	9.6	9.4	9.3	9.1	8.9	8.7	8.6	8.5	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	220
240	10.5	10.3	10.1	9.9	9.7	9.5	9.3	9.2	9.0	8.9	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.0	7.0	6.9	240
260	11.1	10.9	10.7	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	7.4	260
280	11.8	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.8	280
300	12.4	12.1	11.9	11.7	11.4	11.2	11.0	10.9	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	300
320	13.0	12.8	12.5	12.3	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.7	10.6	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	8.8	8.7	320
340	13.7	13.4	13.1	12.9	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	340
360	14.3	14.0	13.7	13.5	13.2	13.0	12.8	12.6	12.4	12.2	12.0	11.8	11.6	11.5	11.3	11.2	11.0	10.9	10.8	10.6	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	360
380	14.9	14.6	14.3	14.1	13.8	13.6	13.3	13.1	12.9	12.7	12.5	12.3	12.2	12.0	11.8	11.7	11.5	11.4	11.3	11.1	11.0	10.9	10.8	10.6	10.5	10.4	10.3	10.2	10.1	10.0	380
400	15.6	15.3	15.0	14.7	14.4	14.2	13.9	13.7	13.5	13.3	13.1	12.9	12.7	12.5	12.4	12.2	12.0	11.9	11.8	11.6	11.5	11.4	11.2	11.1	11.0	10.9	10.8	10.7	10.6	10.5	400
420	16.2	15.9	15.6	15.3	15.0	14.7	14.5	14.3	14.0	13.8	13.6	13.4	13.2	13.0	12.9	12.7	12.5	12.4	12.2	12.1	12.0	11.8	11.7	11.6	11.5	11.3	11.2	11.1	11.0	10.9	420
440	16.8	16.5	16.2	15.9	15.6	15.3	15.1	14.8	14.6	14.4	14.2	14.0	13.8	13.6	13.4	13.2	13.1	12.9	12.7	12.6	12.4	12.3	12.2	12.1	11.9	11.8	11.7	11.6	11.5	11.4	440
460	17.5	17.1	16.8	16.5	16.2	15.9	15.7	15.4	15.2	14.9	14.7	14.5	14.3	14.1	13.9	13.7	13.6	13.4	13.2	13.1	12.9	12.8	12.7	12.5	12.4	12.3	12.1	12.0	11.9	11.8	460
480	18.1	17.8	17.4	17.1	16.8	16.5	16.2	16.0	15.7	15.5	15.2	15.0	14.8	14.6	14.4	14.2	14.1	13.9	13.7	13.6	13.4	13.3	13.1	13.0	12.9	12.7	12.6	12.5	12.4	12.3	480
500	18.8	18.4	18.0	17.7	17.4	17.1	16.8	16.5	16.3	16.0	15.8	15.6	15.3	15.1	14.9	14.7	14.6	14.4	14.2	14.1	13.9	13.7	13.6	13.5	13.3	13.2	13.1	12.9	12.8	12.7	500
600	21.9	21.5	21.1	20.7	20.4	20.0	19.7	19.4	19.1	18.8	18.5	18.2	18.0	17.8	17.5	17.3	17.1	16.9	16.7	16.5	16.3	16.1	16.0	15.8	15.7	15.5	15.3	15.2	15.1	14.9	600
700	25.1	24.6	24.2	23.7	23.3	22.9	22.6	22.2	21.9	21.5	21.2	20.9	20.6	20.4	20.1	19.9	19.6	19.4	19.2	18.9	18.7	18.5	18.3	18.2	18.0	17.8	17.6	17.5	17.3	17.2	700
800	28.3	27.8	27.2	26.8	26.3	25.8	25.4	25.0	24.6	24.3	23.9	23.6	23.3	23.0	22.7	22.4	22.1	21.9	21.6	21.4	21.2	20.9	20.7	20.5	20.3	20.1	19.9	19.7	19.6	19.4	800
900	31.5	30.9	30.3	29.8	29.3	28.8	28.3	27.9	27.4	27.0	26.7	26.3	25.9	25.6	25.3	25.0	24.7	24.4	24.1	23.8	23.6	23.3	23.1	22.9	22.6	22.4	22.2	22.0	21.8	21.6	900
Term. 2/	2.836	2.758	2.683	2.612	2.545	2.482	2.421	2.364	2.309	2.256	2.206	2.158	2.112	2.068	2.026	1.985	1.946	1.909	1.873	1.838	1.805	1.773	1.742	1.712	1.683	1.655	1.627	1.601	1.576	1.551	Term. 2/
L. H. 3/	.031839	.031254	.030701	.030178	.029681	.029209	.028760	.028332	.027924	.027535	.027163	.026808	.026467	.026141	.025828	.025527	.025238	.024961	.024693	.024436	.024188	.023949	.023718	.023496	.023281	.023073	.022871	.022677	.022488	.022305	L. H. 3/

1/ Based on a tare weight of 21.1 tons and a ratio of empty car miles to loaded car miles of 0.880. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.86.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 1 - New England

TANK CARS

TABLE 4.--TERRITORY NO. 1 - NEW ENGLAND

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net loads in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.4	14.5	12.5	10.9	9.7	8.8	8.0	7.3	6.8	6.3	5.9	5.5	5.2	4.9	4.7	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	10
20	19.2	16.0	13.8	12.1	10.7	9.7	8.8	8.1	7.5	7.0	6.5	6.1	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	20
30	20.9	17.5	15.0	13.2	11.8	10.6	9.7	8.9	8.3	7.7	7.2	6.8	6.4	6.0	5.7	5.5	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.6	3.5	3.4	3.4	30
40	22.7	19.0	16.3	14.4	12.8	11.6	10.6	9.7	9.0	8.4	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	40
50	24.5	20.5	17.6	15.5	13.8	12.5	11.4	10.5	9.7	9.1	8.5	8.0	7.6	7.2	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.1	50
60	26.3	22.0	18.9	16.7	14.9	13.5	12.3	11.3	10.5	9.8	9.2	8.6	8.2	7.8	7.4	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.4	60
70	28.0	23.5	20.2	17.8	15.9	14.4	13.2	12.1	11.2	10.5	9.8	9.3	8.8	8.3	7.9	7.6	7.2	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.0	4.9	4.8	70
80	29.8	25.0	21.5	18.9	16.9	15.3	14.0	12.9	12.0	11.2	10.5	9.9	9.4	8.9	8.5	8.1	7.8	7.4	7.2	6.9	6.7	6.4	6.2	6.0	5.9	5.7	5.5	5.4	5.2	5.1	80
90	31.6	26.5	22.8	20.1	18.0	16.3	14.9	13.7	12.7	11.9	11.2	10.5	10.0	9.5	9.0	8.6	8.3	7.9	7.6	7.3	7.1	6.9	6.6	6.4	6.2	6.1	5.9	5.8	5.6	5.5	90
100	33.3	28.0	24.1	21.2	19.0	17.2	15.7	14.5	13.5	12.6	11.8	11.2	10.6	10.0	9.6	9.1	8.8	8.4	8.1	7.8	7.5	7.3	7.1	6.8	6.6	6.5	6.3	6.1	6.0	5.8	100
120	36.9	31.0	26.7	23.5	21.1	19.1	17.5	16.1	15.0	14.0	13.2	12.4	11.8	11.2	10.7	10.2	9.8	9.4	9.0	8.7	8.4	8.1	7.9	7.7	7.4	7.2	7.0	6.9	6.7	6.5	120
140	40.4	33.9	29.3	25.8	23.1	21.0	19.2	17.7	16.5	15.4	14.5	13.7	13.0	12.3	11.8	11.2	10.8	10.4	10.0	9.6	9.3	9.0	8.7	8.5	8.2	8.0	7.8	7.6	7.4	7.2	140
160	44.0	36.9	31.9	28.1	25.2	22.9	20.9	19.3	18.0	16.8	15.8	14.9	14.2	13.5	12.8	12.3	11.8	11.3	10.9	10.5	10.2	9.9	9.6	9.3	9.0	8.8	8.5	8.3	8.1	7.9	160
180	47.5	39.9	34.5	30.4	27.3	24.7	22.7	20.9	19.5	18.2	17.1	16.2	15.3	14.6	13.9	13.3	12.8	12.3	11.9	11.4	11.1	10.7	10.4	10.1	9.8	9.5	9.3	9.1	8.9	8.6	180
200	51.1	42.9	37.1	32.7	29.3	26.6	24.4	22.5	21.0	19.6	18.5	17.4	16.5	15.7	15.0	14.4	13.8	13.3	12.8	12.3	11.9	11.6	11.2	10.9	10.6	10.3	10.0	9.8	9.6	9.4	200
220	54.6	45.9	39.7	35.0	31.4	28.5	26.1	24.1	22.5	21.0	19.8	18.7	17.7	16.9	16.1	15.4	14.8	14.2	13.7	13.3	12.8	12.4	12.0	11.7	11.4	11.1	10.8	10.5	10.3	10.1	220
240	58.2	48.9	42.3	37.3	33.5	30.4	27.8	25.7	24.0	22.4	21.1	20.0	18.9	18.0	17.2	16.5	15.8	15.2	14.7	14.2	13.7	13.3	12.9	12.5	12.2	11.9	11.6	11.3	11.0	10.8	240
260	61.7	51.9	44.9	39.6	35.5	32.3	29.6	27.3	25.5	23.8	22.4	21.2	20.1	19.2	18.3	17.5	16.8	16.2	15.6	15.1	14.6	14.1	13.7	13.3	13.0	12.6	12.3	12.0	11.7	11.5	260
280	65.2	54.9	47.5	41.9	37.6	34.1	31.3	28.9	27.0	25.2	23.8	22.5	21.3	20.3	19.4	18.6	17.8	17.2	16.6	16.0	15.5	15.0	14.5	14.1	13.8	13.4	13.1	12.7	12.5	12.2	280
300	68.8	57.9	50.1	44.2	39.7	36.0	33.0	30.6	28.5	26.7	25.1	23.7	22.5	21.4	20.5	19.6	18.8	18.1	17.5	16.9	16.3	15.8	15.4	14.9	14.5	14.2	13.8	13.5	13.2	12.9	300
320	72.3	60.9	52.7	46.5	41.7	37.9	34.8	32.2	29.9	28.1	26.4	25.0	23.7	22.6	21.6	20.7	19.9	19.1	18.4	17.8	17.2	16.7	16.2	15.8	15.3	14.9	14.6	14.2	13.9	13.6	320
340	75.9	63.8	55.2	48.8	43.8	39.8	36.5	33.8	31.4	29.5	27.7	26.2	24.9	23.7	22.7	21.7	20.9	20.1	19.4	18.7	18.1	17.6	17.0	16.6	16.1	15.7	15.3	15.0	14.6	14.3	340
360	79.4	66.8	57.8	51.1	45.9	41.7	38.2	35.4	32.9	30.9	29.1	27.5	26.1	24.9	23.8	22.8	21.9	21.1	20.3	19.6	19.0	18.4	17.9	17.4	16.9	16.5	16.1	15.7	15.3	15.0	360
380	83.0	69.8	60.4	53.4	47.9	43.5	40.0	37.0	34.4	32.3	30.4	28.7	27.3	26.0	24.9	23.8	22.9	22.0	21.2	20.5	19.9	19.3	18.7	18.2	17.7	17.2	16.8	16.4	16.1	15.7	380
400	86.5	72.8	63.0	55.7	50.0	45.4	41.7	38.6	35.9	33.7	31.7	30.0	28.5	27.2	25.9	24.9	23.9	23.0	22.2	21.4	20.8	20.1	19.5	19.0	18.5	18.0	17.6	17.2	16.8	16.4	400
420	90.1	75.8	65.6	58.0	52.0	47.3	43.4	40.2	37.4	35.1	33.0	31.3	29.7	28.3	27.0	25.9	24.9	24.0	23.1	22.4	21.6	21.0	20.4	19.8	19.3	18.8	18.3	17.9	17.5	17.1	420
440	93.6	78.8	68.2	60.3	54.1	49.2	45.1	41.8	38.9	36.5	34.4	32.5	30.9	29.4	28.1	27.0	25.9	24.9	24.1	23.3	22.5	21.8	21.2	20.6	20.1	19.6	19.1	18.6	18.2	17.8	440
460	97.1	81.8	70.8	62.6	56.2	51.1	46.9	43.4	40.4	37.9	35.7	33.8	32.1	30.6	29.2	28.0	26.9	25.9	25.0	24.2	23.4	22.7	22.0	21.4	20.9	20.3	19.8	19.4	18.9	18.5	460
480	100.7	84.8	73.4	64.9	58.2	52.9	48.6	45.0	41.9	39.3	37.0	35.0	33.3	31.7	30.3	29.1	27.9	26.9	25.9	25.1	24.3	23.6	22.9	22.2	21.7	21.1	20.6	20.1	19.7	19.2	480
500	104.2	87.8	76.0	67.2	60.3	54.8	50.3	46.6	43.4	40.7	38.3	36.3	34.5	32.9	31.4	30.1	28.9	27.9	26.9	26.0	25.2	24.4	23.7	23.0	22.4	21.9	21.3	20.8	20.4	19.9	500
600	122.0	102.7	89.0	78.7	70.6	64.2	59.0	54.6	50.9	47.7	45.0	42.6	40.4	38.6	36.9	35.3	34.0	32.7	31.6	30.5	29.6	28.7	27.9	27.1	26.4	25.7	25.1	24.5	24.0	23.5	600
700	139.7	117.7	101.9	90.1	81.0	73.6	67.6	62.6	58.4	54.7	51.6	48.8	46.4	44.3	42.3	40.6	39.0	37.6	36.3	35.1	34.0	33.0	32.0	31.2	30.3	29.6	28.9	28.2	27.6	27.0	700
800	157.4	132.6	114.9	101.6	91.3	83.0	76.3	70.6	65.9	61.8	58.2	55.1	52.4	50.0	47.8	45.8	44.1	42.5	41.0	39.6	38.4	37.2	36.2	35.2	34.3	33.4	32.6	31.9	31.2	30.5	800
900	175.1	147.6	127.9	113.1	101.6	92.4	84.9	78.6	73.3	68.8	64.9	61.4	58.4	55.7	53.2	51.1	49.1	47.3	45.7	44.2	42.8	41.5	40.4	39.3	38.2	37.3	36.4	35.6	34.8	34.0	900
Term. 2/	15.620	13.017	11.157	9.763	8.678	7.810	7.100	6.508	6.008	5.579	5.207	4.881	4.594	4.339	4.111	3.905	3.719	3.550	3.396	3.254	3.124	3.004	2.893	2.789	2.693	2.603	2.519	2.441	2.367	2.297	Term. 2/
L. H. 3/	.177230	.149492	.129679	.114819	.103261	.094015	.086450	.080146	.074812	.070239	.066277	.062809	.059750	.057031	.054597	.052408	.050426	.048625	.046980	.045473	.044086	.042806	.041620	.040520	.039495	.038538	.037644	.036805	.036017	.035275	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.993. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.86.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 4 (Concluded).--TERRITORY NO. 1 - NEW ENGLAND

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net loads in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70	4.7	4.5	4.4	4.3	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.5	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.9	3.8	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100	5.7	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.4	4.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
120	6.4	6.2	6.1	6.0	5.9	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	4.9	4.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
140	7.1	6.9	6.8	6.6	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
160	7.8	7.6	7.4	7.3	7.1	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
180	8.5	8.3	8.1	7.9	7.8	7.6	7.5	7.4	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
200	9.1	9.0	8.8	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
220	9.8	9.6	9.4	9.2	9.1	8.9	8.7	8.6	8.4	8.3	8.2	8.1	7.9	7.8	7.7	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
240	10.5	10.3	10.1	9.9	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.3	8.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
260	11.2	11.0	10.8	10.6	10.4	10.2	10.0	9.8	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
280	11.9	11.7	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	9.9	9.8	9.6	9.5	9.4	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
300	12.6	12.3	12.1	11.9	11.6	11.4	11.2	11.0	10.9	10.7	10.5	10.4	10.2	10.1	9.9	9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
320	13.3	13.0	12.8	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.8	10.6	10.5	10.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
340	14.0	13.7	13.4	13.2	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.4	11.2	11.0	10.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
360	14.7	14.4	14.1	13.8	13.6	13.3	13.1	12.9	12.7	12.5	12.3	12.1	11.9	11.8	11.6	11.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
380	15.4	15.1	14.8	14.5	14.2	14.0	13.7	13.5	13.3	13.1	12.9	12.7	12.5	12.3	12.2	12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
400	16.1	15.7	15.4	15.1	14.9	14.6	14.3	14.1	13.9	13.7	13.5	13.3	13.1	12.9	12.7	12.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
420	16.8	16.4	16.1	15.8	15.5	15.2	15.0	14.7	14.5	14.3	14.0	13.8	13.6	13.4	13.3	13.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
440	17.4	17.1	16.8	16.4	16.1	15.9	15.6	15.3	15.1	14.8	14.6	14.4	14.2	14.0	13.8	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
460	18.1	17.8	17.4	17.1	16.8	16.5	16.2	15.9	15.7	15.4	15.2	15.0	14.8	14.6	14.4	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
480	18.8	18.4	18.1	17.8	17.4	17.1	16.8	16.6	16.3	16.0	15.8	15.6	15.3	15.1	14.9	14.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
500	19.5	19.1	18.8	18.4	18.1	17.8	17.5	17.2	16.9	16.6	16.4	16.1	15.9	15.7	15.5	15.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
600	23.0	22.5	22.1	21.7	21.3	20.9	20.6	20.2	19.9	19.6	19.3	19.0	18.8	18.5	18.3	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
700	26.4	25.9	25.4	24.9	24.5	24.1	23.7	23.3	22.9	22.6	22.2	21.9	21.6	21.3	21.0	20.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
800	30.0	29.3	28.7	28.2	27.7	27.2	26.8	26.4	25.9	25.5	25.2	24.8	24.5	24.1	23.8	23.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
900	33.3	32.7	32.1	31.5	30.9	30.4	29.9	29.4	29.0	28.5	28.1	27.7	27.3	26.9	26.6	26.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
Term. 2/	2.231	2.169	2.1[illegible]	2.055	2.003	1.953	1.905	1.860	1.816	1.775	1.736	1.698	1.662	1.627	1.594	1.562	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.034576	.033915	.033291	.032699	.032137	.031604	.031096	.030613	.030152	.029713	.029292	.028890	.028505	.028136	.027783	.027443	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.993. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.86.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 1 - New England

STOCK CARS

TABLE 5.--TERRITORY NO. 1 - NEW ENGLAND

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	21.5	17.9	15.4	13.5	12.0	10.8	9.8	9.0	8.3	7.7	7.2	6.8	6.4	6.0	5.7	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	-	-	-	-	10
20	23.1	19.3	16.6	14.5	12.9	11.7	10.6	9.8	9.0	8.4	7.8	7.4	7.0	6.6	6.2	5.9	5.7	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	-	-	-	-	20
30	24.7	20.7	17.8	15.6	13.9	12.5	11.4	10.5	9.7	9.0	8.5	8.0	7.5	7.1	6.8	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	-	-	-	-	30
40	26.4	22.1	19.0	16.6	14.8	13.4	12.2	11.2	10.4	9.7	9.1	8.5	8.1	7.6	7.3	6.9	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.1	4.9	4.8	-	-	-	-	40
50	28.0	23.4	20.2	17.7	15.8	14.3	13.0	12.0	11.1	10.3	9.7	9.1	8.6	8.2	7.8	7.4	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.3	5.1	-	-	-	-	50
60	29.6	24.8	21.4	18.8	16.8	15.1	13.8	12.7	11.8	11.0	10.3	9.7	9.2	8.7	8.3	7.9	7.5	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.5	-	-	-	-	60
70	31.3	26.2	22.5	19.8	17.7	16.0	14.6	13.5	12.5	11.7	10.9	10.3	9.7	9.2	8.8	8.4	8.0	7.7	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.8	-	-	-	-	70
80	32.9	27.6	23.7	20.9	18.7	16.9	15.4	14.2	13.2	12.3	11.5	10.9	10.3	9.8	9.3	8.9	8.5	8.1	7.8	7.5	7.3	7.0	6.8	6.6	6.4	6.2	-	-	-	-	80
90	34.5	28.9	24.9	21.9	19.6	17.7	16.2	15.0	13.9	13.0	12.2	11.5	10.8	10.3	9.8	9.4	9.0	8.6	8.3	8.0	7.7	7.4	7.2	7.0	6.8	6.6	-	-	-	-	90
100	36.2	30.3	26.1	23.0	20.6	18.6	17.0	15.7	14.6	13.6	12.8	12.0	11.4	10.8	10.3	9.8	9.4	9.1	8.7	8.4	8.1	7.8	7.6	7.3	7.1	6.9	-	-	-	-	100
120	39.4	33.1	28.5	25.1	22.5	20.4	18.6	17.2	16.0	14.9	14.0	13.2	12.5	11.9	11.3	10.8	10.4	10.0	9.6	9.2	8.9	8.6	8.4	8.1	7.9	7.6	-	-	-	-	120
140	42.7	35.8	30.9	27.2	24.4	22.1	20.2	18.7	17.3	16.2	15.2	14.4	13.6	12.9	12.3	11.8	11.3	10.9	10.5	10.1	9.7	9.4	9.1	8.9	8.6	8.4	-	-	-	-	140
160	45.9	38.6	33.3	29.4	26.3	23.8	21.8	20.1	18.7	17.5	16.5	15.5	14.7	14.0	13.4	12.8	12.3	11.8	11.3	10.9	10.6	10.2	9.9	9.6	9.3	9.1	-	-	-	-	160
180	49.2	41.3	35.7	31.5	28.2	25.6	23.4	21.6	20.1	18.8	17.7	16.7	15.8	15.1	14.4	13.8	13.2	12.7	12.2	11.8	11.4	11.0	10.7	10.4	10.1	9.8	-	-	-	-	180
200	52.5	44.1	38.1	33.6	30.1	27.3	25.0	23.1	21.5	20.1	18.9	17.9	17.0	16.1	15.4	14.7	14.1	13.6	13.1	12.6	12.2	11.8	11.5	11.1	10.8	10.5	-	-	-	-	200
220	55.7	46.8	40.5	35.7	32.0	29.0	26.6	24.6	22.9	21.4	20.2	19.0	18.1	17.2	16.4	15.7	15.1	14.5	14.0	13.5	13.0	12.6	12.3	11.9	11.6	11.3	-	-	-	-	220
240	59.0	49.6	42.9	37.8	33.9	30.8	28.2	26.1	24.3	22.7	21.4	20.2	19.2	18.3	17.4	16.7	16.0	15.4	14.8	14.3	13.9	13.4	13.0	12.7	12.3	12.0	-	-	-	-	240
260	62.2	52.3	45.3	39.9	35.8	32.5	29.8	27.6	25.7	24.0	22.6	21.4	20.3	19.3	18.4	17.7	17.0	16.3	15.7	15.2	14.7	14.2	13.8	13.4	13.1	12.7	-	-	-	-	260
280	65.5	55.1	47.6	42.1	37.7	34.3	31.4	29.1	27.0	25.3	23.8	22.5	21.4	20.4	19.5	18.6	17.9	17.2	16.6	16.0	15.5	15.0	14.6	14.2	13.8	13.4	-	-	-	-	280
300	68.8	57.8	50.0	44.2	39.6	36.0	33.0	30.5	28.4	26.6	25.1	23.7	22.5	21.4	20.5	19.6	18.8	18.1	17.5	16.9	16.3	15.8	15.4	14.9	14.5	14.2	-	-	-	-	300
320	72.0	60.6	52.4	46.3	41.5	37.7	34.6	32.0	29.8	28.0	26.3	24.9	23.6	22.5	21.5	20.6	19.8	19.0	18.4	17.7	17.2	16.6	16.2	15.7	15.3	14.9	-	-	-	-	320
340	75.3	63.3	54.8	48.4	43.4	39.5	36.2	33.5	31.2	29.2	27.5	26.0	24.7	23.6	22.5	21.6	20.7	19.9	19.2	18.6	18.0	17.4	16.9	16.5	16.0	15.6	-	-	-	-	340
360	78.5	66.1	57.2	50.5	45.4	41.2	37.8	35.0	32.6	30.5	28.8	27.2	25.8	24.6	23.5	22.5	21.7	20.9	20.1	19.4	18.8	18.2	17.7	17.2	16.8	16.3	-	-	-	-	360
380	81.8	68.8	59.6	52.7	47.3	42.9	39.4	36.5	34.0	31.8	30.0	28.4	27.0	25.7	24.5	23.5	22.6	21.8	21.0	20.3	19.6	19.0	18.5	18.0	17.5	17.1	-	-	-	-	380
400	85.1	71.6	62.0	54.8	49.2	44.7	41.0	38.0	35.4	33.2	31.2	29.5	28.1	26.7	25.6	24.5	23.5	22.7	21.9	21.1	20.5	19.8	19.3	18.7	18.2	17.8	-	-	-	-	400
420	88.3	74.3	64.4	56.9	51.1	46.4	42.6	39.4	36.8	34.5	32.5	30.7	29.2	27.8	26.6	25.5	24.5	23.6	22.7	22.0	21.3	20.6	20.0	19.5	19.0	18.5	-	-	-	-	420
440	91.6	77.1	66.8	59.0	53.0	48.2	44.2	40.9	38.1	35.8	33.7	31.9	30.3	28.9	27.6	26.5	25.4	24.5	23.6	22.8	22.1	21.4	20.8	20.3	19.7	19.2	-	-	-	-	440
460	94.8	79.9	69.2	61.1	54.9	50.0	45.8	42.4	39.5	37.1	34.9	33.0	31.4	29.9	28.6	27.4	26.4	25.4	24.5	23.7	22.9	22.2	21.6	21.0	20.5	19.9	-	-	-	-	460
480	98.1	82.6	71.5	63.2	56.8	51.6	47.4	43.9	40.9	38.4	36.2	34.2	32.5	31.0	29.6	28.4	27.3	26.3	25.4	24.5	23.8	23.1	22.4	21.8	21.2	20.7	-	-	-	-	480
500	101.3	85.4	73.8	65.4	58.7	53.4	49.0	45.4	42.3	39.7	37.4	35.4	33.6	32.1	30.7	29.4	28.2	27.2	26.3	25.4	24.6	23.9	23.2	22.5	21.9	21.4	-	-	-	-	500
600	117.6	99.1	85.9	76.0	68.2	62.1	57.0	52.8	49.2	46.2	43.5	41.2	39.2	37.4	35.7	34.3	32.9	31.7	30.6	29.6	28.7	27.9	27.1	26.3	25.6	25.0	-	-	-	-	600
700	133.9	112.9	97.8	86.5	77.9	70.8	65.0	60.2	56.2	52.7	49.7	47.1	44.7	42.7	40.8	39.2	37.7	36.3	35.0	33.9	32.8	31.9	31.0	30.1	29.4	28.6	-	-	-	-	700
800	150.2	126.6	109.8	97.1	87.3	79.4	73.0	67.6	63.1	59.2	55.8	52.9	50.3	48.0	45.9	44.0	42.4	40.8	39.4	38.1	37.0	35.9	34.9	33.9	33.1	32.2	-	-	-	-	800
900	166.5	140.4	121.7	107.7	96.8	88.1	81.0	75.1	70.0	65.7	62.0	58.7	55.8	53.3	51.0	48.9	47.1	45.4	43.8	42.4	41.1	39.9	38.8	37.7	36.8	35.9	-	-	-	-	900
Term. 2/	19.554	16.545	14.181	12.409	11.030	9.927	9.025	8.273	7.636	7.091	6.618	6.204	5.839	5.515	5.225	4.968	4.727	4.512	4.316	4.136	3.971	3.818	3.677	3.545	3.423	3.309	-	-	-	-	Term. 2/
L. H. 3/	.162990	.137625	.119507	.105919	.095350	.086895	.079977	.074213	.069335	.065154	.061530	.058359	.055562	.053075	.050850	.048848	.047036	.045389	.043885	.042506	.041238	.040067	.038983	.037977	.037040	.036165	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 20.4 tons and a ratio of empty car miles to loaded car miles of 0.981. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.86.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 6.—TERRITORY NO. 1 - NEW ENGLAND

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.6	14.7	12.6	11.0	9.8	8.8	8.0	7.4	6.8	6.3	5.9	5.6	5.2	5.0	4.7	4.5	4.3	4.1	3.9	3.7	3.6	3.5	3.3	3.2	3.1	3.0	-	-	-	-	10
20	19.5	16.3	14.0	12.3	10.9	9.9	9.0	8.3	7.6	7.1	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.5	3.4	-	-	-	-	20
30	21.5	18.0	15.4	13.6	12.1	10.9	9.9	9.1	8.5	7.9	7.4	6.9	6.5	6.2	5.9	5.6	5.4	5.1	4.9	4.7	4.6	4.4	4.2	4.1	4.0	3.9	-	-	-	-	30
40	23.4	19.6	16.9	14.8	13.2	11.9	10.9	10.0	9.3	8.7	8.1	7.6	7.2	6.8	6.5	6.2	5.9	[illegible]	5.4	5.2	5.0	4.9	4.7	4.5	4.4	4.3	-	-	-	-	40
50	25.4	21.3	18.3	16.1	14.3	13.0	11.8	10.9	10.1	9.4	8.8	8.3	7.9	7.4	7.1	6.8	6.5	[illegible]	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	-	-	-	-	50
60	27.4	22.9	19.7	17.3	15.5	14.0	12.8	11.8	10.9	10.2	9.5	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.3	5.1	-	-	-	-	60
70	29.3	24.5	21.1	18.6	16.6	15.0	13.7	12.7	11.7	11.0	10.3	9.7	9.2	8.7	8.3	7.9	7.6	7.2	7.0	6.7	6.5	6.2	6.0	5.9	5.7	5.5	-	-	-	-	70
80	31.3	26.2	22.6	19.9	17.8	16.1	14.7	13.5	12.6	11.7	11.0	10.4	9.8	9.3	8.9	8.5	8.1	7.8	7.5	7.2	6.9	6.7	6.5	6.3	6.1	5.9	-	-	-	-	80
90	33.2	27.8	24.0	21.1	18.9	17.1	15.6	14.4	13.4	12.5	11.7	11.0	10.5	9.9	9.5	9.0	8.6	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	-	-	-	-	90
100	35.2	29.5	25.4	22.4	20.0	18.1	16.6	15.3	14.2	13.3	12.4	11.7	11.1	10.6	10.1	9.6	9.2	8.8	8.5	8.2	7.9	7.6	7.4	7.2	7.0	6.8	-	-	-	-	100
120	39.1	32.8	28.3	24.9	22.3	20.2	18.5	17.0	15.8	14.8	13.9	13.1	12.4	11.8	11.2	10.7	10.3	9.9	9.5	9.2	8.9	8.6	8.3	8.0	7.8	7.6	-	-	-	-	120
140	43.0	36.1	31.1	27.4	24.6	22.3	20.4	18.8	17.5	16.3	15.3	14.5	13.7	13.0	12.4	11.9	11.4	10.9	10.5	10.2	9.8	9.5	9.2	8.9	8.7	8.4	-	-	-	-	140
160	46.9	39.4	34.0	30.0	26.8	24.3	22.3	20.6	19.1	17.9	16.8	15.8	15.0	14.3	13.6	13.0	12.5	12.0	11.5	11.1	10.8	10.4	10.1	9.8	9.5	9.3	-	-	-	-	160
180	50.8	42.7	36.9	32.5	29.1	26.4	24.2	22.3	20.7	19.4	18.2	17.2	16.3	15.5	14.8	14.2	13.6	13.1	12.6	12.1	11.7	11.3	11.0	10.7	10.4	10.1	-	-	-	-	180
200	54.7	46.0	39.7	35.0	31.4	28.4	26.1	24.1	22.4	20.9	19.7	18.6	17.6	16.8	16.0	15.3	14.7	14.1	13.6	13.1	12.7	12.3	11.9	11.5	11.2	10.9	-	-	-	-	200
220	58.6	49.3	42.6	37.5	33.6	30.5	28.0	25.8	24.0	22.5	21.1	20.0	18.9	18.0	17.2	16.4	15.8	15.2	14.6	14.1	13.6	13.2	12.8	12.4	12.1	11.8	-	-	-	-	220
240	62.5	52.6	45.4	40.1	35.9	32.6	29.8	27.6	25.7	24.0	22.6	21.3	20.2	19.2	18.4	17.6	16.9	16.2	15.6	15.1	14.6	14.1	13.7	13.3	12.9	12.6	-	-	-	-	240
260	66.5	55.9	48.3	42.6	38.2	34.6	31.7	29.3	27.3	25.5	24.0	22.7	21.5	20.5	19.6	18.7	18.0	17.3	16.6	16.1	15.5	15.0	14.6	14.2	13.8	13.4	-	-	-	-	260
280	70.4	59.1	51.1	45.1	40.4	36.7	33.6	31.1	28.9	27.1	25.5	24.1	22.8	21.7	20.7	19.9	19.1	18.3	17.7	17.1	16.5	16.0	15.5	15.0	14.6	14.2	-	-	-	-	280
300	74.3	62.4	54.0	47.6	42.7	38.8	35.5	32.8	30.6	28.6	26.9	25.4	24.1	23.0	21.9	21.0	20.2	19.4	18.7	18.0	17.4	16.9	16.4	15.9	15.5	15.1	-	-	-	-	300
320	78.2	65.7	56.8	50.2	45.0	40.8	37.4	34.6	32.2	30.1	28.4	26.8	25.4	24.2	23.1	22.1	21.3	20.4	19.7	19.0	18.4	17.8	17.3	16.8	16.3	15.9	-	-	-	-	320
340	82.1	69.0	59.7	52.7	47.2	42.9	39.3	36.4	33.8	31.7	29.8	28.2	26.7	25.5	24.3	23.3	22.3	21.5	20.7	20.0	19.4	18.8	18.2	17.7	17.2	16.7	-	-	-	-	340
360	86.0	72.3	62.5	55.2	49.5	45.0	41.2	38.1	35.5	33.2	31.3	29.6	28.0	26.7	25.5	24.4	23.4	22.6	21.7	21.0	20.3	19.7	19.1	18.6	18.0	17.6	-	-	-	-	360
380	89.9	75.6	65.4	57.7	51.8	47.0	43.1	39.9	37.1	34.8	32.7	30.9	29.3	27.9	26.7	25.6	24.5	23.6	22.8	22.0	21.3	20.6	20.0	19.4	18.9	18.4	-	-	-	-	380
400	93.8	78.9	68.3	60.3	54.1	49.1	45.0	41.6	38.7	36.3	34.2	32.3	30.6	29.2	27.9	26.7	25.6	24.7	23.8	23.0	22.2	21.5	20.9	20.3	19.8	19.2	-	-	-	-	400
420	97.7	82.2	71.1	62.8	56.3	51.1	46.9	43.4	40.4	37.8	35.6	33.7	32.0	30.4	29.1	27.8	26.7	25.7	24.8	24.0	23.2	22.5	21.8	21.2	20.6	20.1	-	-	-	-	420
440	101.7	85.5	74.0	65.3	58.6	53.2	48.8	45.1	42.0	39.4	37.1	35.0	33.3	31.7	30.3	29.0	27.8	26.8	25.8	24.9	24.1	23.4	22.7	22.1	21.5	20.9	-	-	-	-	440
460	105.6	88.8	76.8	67.8	60.9	55.3	50.7	46.9	43.7	40.9	38.5	36.4	34.6	32.9	31.4	30.1	28.9	27.8	26.8	25.9	25.1	24.3	23.6	22.9	22.3	21.7	-	-	-	-	460
480	109.5	92.1	79.7	70.4	63.1	57.3	52.6	48.6	45.3	42.4	39.9	37.8	35.9	34.2	32.6	31.3	30.0	28.9	27.9	26.9	26.0	25.2	24.5	23.8	23.2	22.6	-	-	-	-	480
500	113.4	95.4	82.5	72.9	65.4	59.4	54.5	50.4	46.9	44.0	41.4	39.1	37.2	35.4	33.8	32.4	31.1	29.9	28.9	27.9	27.0	26.2	25.4	24.7	24.0	23.4	-	-	-	-	500
600	132.9	111.9	96.8	85.5	76.7	69.7	64.0	59.2	55.1	51.6	48.6	46.0	43.7	41.6	39.8	38.1	36.6	35.2	34.0	32.8	31.2	30.8	29.9	29.1	28.3	27.6	-	-	-	-	600
700	152.5	128.3	111.1	98.1	88.1	80.0	73.4	68.0	63.3	59.3	55.9	52.9	50.2	47.8	45.7	43.8	42.1	40.5	39.1	37.8	36.5	35.4	34.4	33.4	32.5	31.7	-	-	-	-	700
800	172.1	144.8	125.4	110.8	99.4	90.3	82.9	76.7	71.5	67.0	63.1	59.7	56.7	54.0	51.6	49.5	47.5	45.8	44.2	42.7	41.3	40.1	38.9	37.8	36.8	35.9	-	-	-	-	800
900	191.6	161.3	139.6	123.4	110.8	100.7	92.4	85.5	79.7	74.7	70.3	66.6	63.2	60.2	57.6	55.2	53.0	51.1	49.3	47.6	46.1	44.7	43.4	42.2	41.1	40.0	-	-	-	-	900
Term. 2/	15.620	13.017	11.157	9.763	8.678	7.810	7.100	6.508	6.008	5.579	5.207	4.881	4.594	4.339	4.111	3.905	3.719	3.550	3.396	3.254	3.124	3.004	2.893	2.789	2.693	2.603	-	-	-	-	Term. 2/
L. H. 3/	.195540	.164750	.142757	.126263	.113433	.103170	.094773	.087775	.081854	.076779	.072380	.068531	.065135	.062117	.059416	.056985	.054786	.052786	.050961	.049288	.047748	.046327	.045011	.043789	.042652	.041590	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.862. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.86.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 1 - New England

LESS-CARLOAD

TABLE 7—TERRITORY NO. 1 - NEW ENGLAND

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	89.3	65.2	55.1	49.1	45.1	42.2	40.0	38.4	37.0	35.9	35.0	34.2	33.6	33.0	32.5	32.1	31.7	31.3	31.0	30.7	30.4	30.2	30.0	29.8	29.6	29.4	29.3	29.1	29.0	10
20	91.7	69.5	58.4	51.8	47.4	44.2	41.8	40.0	38.5	37.3	36.3	35.5	34.7	34.1	33.5	33.1	32.6	32.2	31.9	31.6	31.3	31.0	30.8	30.6	30.4	30.2	30.0	29.8	29.7	20
30	98.0	73.8	61.7	54.5	49.7	46.2	43.6	41.6	40.0	38.7	37.6	36.7	35.9	35.2	34.6	34.1	33.6	33.2	32.8	32.4	32.1	31.8	31.6	31.3	31.1	30.9	30.7	30.5	30.4	30
40	104.3	78.1	65.0	57.2	52.0	48.2	45.4	43.3	41.5	40.1	38.9	37.9	37.0	36.3	35.6	35.1	34.5	34.1	33.7	33.3	33.0	32.7	32.4	32.1	31.9	31.6	31.4	31.2	31.1	40
50	110.6	82.4	68.4	59.9	54.3	50.3	47.2	44.9	43.0	41.5	40.2	39.1	38.2	37.4	36.7	36.1	35.5	35.0	34.6	34.2	33.8	33.5	33.2	32.9	32.6	32.4	32.2	32.0	31.8	50
60	116.9	86.7	71.7	62.6	56.6	52.3	49.0	46.5	44.5	42.9	41.5	40.3	39.3	38.5	37.7	37.1	36.5	35.9	35.5	35.0	34.6	34.3	34.0	33.7	33.4	33.1	32.9	32.7	32.5	60
70	123.2	91.0	75.0	65.3	58.9	54.3	50.8	48.2	46.0	44.3	42.8	41.6	40.5	39.6	38.8	38.1	37.4	36.9	36.4	35.9	35.5	35.1	34.8	34.4	34.1	33.9	33.6	33.4	33.2	70
80	129.5	95.3	78.3	68.0	61.2	56.3	52.6	49.8	47.5	45.6	44.1	42.8	41.7	40.7	39.8	39.1	38.4	37.8	37.3	36.8	36.3	35.9	35.6	35.2	34.9	34.6	34.3	34.1	33.8	80
90	135.8	99.6	81.6	70.7	63.5	58.3	54.4	51.4	49.0	47.0	45.4	44.0	42.8	41.8	40.9	40.1	39.4	38.7	38.2	37.6	37.2	36.7	36.4	36.0	35.7	35.3	35.1	34.8	34.5	90
100	142.1	103.9	84.9	73.4	65.8	60.3	56.2	53.1	50.5	48.4	46.7	45.2	44.0	42.9	41.9	41.1	40.3	39.7	39.1	38.5	38.0	37.6	37.2	36.8	36.4	36.1	35.8	35.5	35.2	100
120	154.7	112.5	91.5	78.8	70.4	64.3	59.8	56.3	53.5	51.2	49.3	47.7	46.3	45.1	44.0	43.1	42.3	41.5	40.9	40.2	39.7	39.2	38.7	38.3	37.9	37.6	37.2	36.9	36.6	120
140	167.3	121.2	98.1	84.2	75.0	68.4	63.4	59.6	56.5	54.0	51.9	50.1	48.6	47.3	46.1	45.1	44.2	43.4	42.6	42.0	41.4	40.8	40.3	39.9	39.4	39.1	38.7	38.3	38.0	140
160	179.9	129.8	104.7	89.6	79.6	72.4	67.0	62.8	59.5	56.8	54.5	52.8	50.9	49.3	48.2	47.1	46.1	45.2	44.4	43.7	43.1	42.5	41.9	41.4	41.0	40.5	40.1	39.8	39.4	160
180	192.6	138.4	111.3	95.0	84.2	76.4	70.6	66.1	62.6	59.5	57.1	55.0	53.2	51.7	50.3	49.1	48.0	47.1	46.2	45.5	44.8	44.1	43.5	43.0	42.5	42.0	41.6	41.2	40.8	180
200	205.2	147.0	117.9	100.4	88.8	80.5	74.2	69.4	65.6	62.3	59.7	57.4	55.5	53.8	52.4	51.1	50.0	48.9	48.0	47.2	46.4	45.8	45.1	44.5	44.0	43.5	43.0	42.6	42.2	200
220	217.8	155.6	124.5	105.8	93.4	84.5	77.8	72.6	68.5	65.1	62.3	59.9	57.8	56.0	54.5	53.1	51.9	50.8	49.8	48.9	48.1	47.4	46.7	46.1	45.5	45.0	44.5	44.0	43.6	220
240	230.4	164.2	131.1	111.2	98.0	88.5	81.4	75.9	71.5	67.9	64.9	62.3	60.1	58.2	56.6	55.1	53.8	52.7	51.6	50.7	49.8	49.0	48.3	47.6	47.0	46.5	45.9	45.4	45.0	240
260	243.0	172.8	137.7	116.6	102.6	92.5	85.0	79.2	74.5	70.6	67.5	64.8	62.4	60.4	58.7	57.1	55.8	54.5	53.4	52.4	51.5	50.7	49.9	49.2	48.5	47.9	47.4	46.9	46.4	260
280	255.6	181.4	144.3	122.0	107.2	96.6	88.6	82.4	77.5	73.4	70.1	67.2	64.7	62.6	60.8	59.1	57.7	56.4	55.2	54.1	53.2	52.3	51.5	50.7	50.1	49.4	48.8	48.3	47.8	280
300	268.2	190.0	150.9	127.4	111.8	100.6	92.2	85.7	80.5	76.2	72.6	69.6	67.1	64.8	62.9	61.1	59.6	58.2	57.0	55.9	54.9	53.9	53.1	52.6	51.6	50.9	50.3	49.7	49.2	300
320	280.8	198.6	157.5	132.8	116.4	104.6	95.8	88.9	83.5	79.0	75.2	72.1	69.4	67.0	65.0	63.1	61.5	60.1	58.8	57.6	56.5	55.6	54.7	53.9	53.1	52.4	51.7	51.1	50.6	320
340	293.5	207.2	164.1	138.2	121.0	108.6	99.4	92.2	86.5	81.8	77.8	74.5	71.7	69.2	67.1	65.2	63.5	61.9	60.6	59.4	58.2	57.2	56.3	55.4	54.6	53.9	53.2	52.6	52.0	340
360	306.1	215.8	170.7	143.6	125.6	112.7	103.0	95.5	89.5	84.5	80.4	77.0	74.0	71.4	69.1	67.2	65.4	63.8	62.4	61.1	59.9	58.8	57.9	57.0	56.1	55.4	54.6	54.0	53.4	360
380	318.7	224.4	177.3	149.0	130.2	116.7	106.6	98.7	92.5	87.3	83.0	79.4	76.3	73.6	71.2	69.2	67.3	65.7	64.2	62.8	61.6	60.5	59.5	58.5	57.6	56.8	56.1	55.4	54.7	380
400	331.3	233.0	183.9	154.4	134.8	120.7	110.2	102.0	95.5	90.1	85.6	81.8	78.6	75.8	73.3	71.2	69.2	67.5	66.0	64.6	63.3	62.1	61.1	60.1	59.2	58.3	57.5	56.8	56.1	400
420	343.9	241.6	190.5	159.8	139.4	124.7	113.8	105.3	98.4	92.9	88.2	84.3	80.9	78.0	75.4	73.2	71.2	69.4	67.8	66.3	65.0	63.8	62.7	61.6	60.7	59.8	59.0	58.2	57.5	420
440	356.5	250.2	197.1	165.2	144.0	128.8	117.4	108.5	101.4	95.6	90.8	86.7	83.2	80.2	77.5	75.2	73.1	71.2	69.6	68.0	66.7	65.4	64.2	63.2	62.2	61.3	60.4	59.7	58.9	440
460	369.1	258.8	203.7	170.6	148.6	132.8	121.0	111.8	104.4	98.4	93.4	89.2	85.8	82.4	79.6	77.2	75.0	73.1	71.4	69.8	68.3	67.0	65.8	64.7	63.7	62.8	61.9	61.1	60.3	460
480	381.7	267.4	210.3	176.0	153.2	136.8	124.6	115.1	107.4	101.2	96.0	91.6	87.8	84.6	81.7	79.2	77.0	74.9	73.1	71.5	70.0	68.7	67.4	66.3	65.2	64.3	63.3	62.5	61.7	480
500	394.4	276.1	216.9	181.4	157.8	140.9	128.2	118.3	110.4	104.0	98.6	94.1	90.1	86.8	83.8	81.2	78.9	76.8	74.9	73.2	71.7	70.3	69.0	67.8	66.7	65.7	64.8	63.9	63.1	500
600	457.4	319.1	249.9	208.4	180.7	161.0	146.2	134.6	125.4	117.9	111.6	106.3	101.7	97.7	94.3	91.2	88.5	86.1	83.9	81.9	80.1	78.5	77.0	75.6	74.3	73.1	72.0	71.0	70.1	600
700	520.5	362.1	282.9	235.4	203.7	181.1	164.1	150.9	140.4	131.7	124.6	118.5	113.2	108.7	104.6	101.3	98.2	95.4	92.9	90.6	88.6	86.7	85.0	83.4	81.9	80.6	79.3	78.1	77.0	700
800	583.6	405.1	315.9	262.4	226.7	201.2	182.1	167.3	155.4	145.6	137.5	130.7	124.6	119.7	115.2	111.3	107.8	104.7	101.9	99.3	97.0	94.9	92.9	91.1	89.5	88.0	86.6	85.2	84.0	800
900	646.6	448.2	349.0	289.4	249.7	221.4	200.1	183.6	170.4	159.5	150.5	142.9	136.3	130.7	125.7	121.3	117.4	113.9	110.8	108.0	105.4	103.1	100.9	98.9	97.1	95.4	93.8	92.3	91.0	900
Term. 2/	79.040	60.910	51.845	46.405	42.780	40.190	38.250	36.735	35.530	34.540	33.715	33.020	32.420	31.900	31.450	31.050	30.695	30.375	30.090	29.830	29.595	29.380	29.185	29.000	28.835	28.680	28.535	28.400	28.275	Term. 2/
L. H. 3/	.63064	.43029	.33012	.27001	.22994	.20132	.17965	.16316	.14980	.13887	.12977	.12206	.11545	.10973	.10472	.10030	.09637	.09286	.08970	.08683	.08423	.08186	.07968	.07767	.07582	.07411	.07252	.07104	.06966	L. H. 3/

1/ Based on a tare weight of 21.1 tons and a ratio of empty car miles to loaded car miles of 0.284. The Less-carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.
For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.22.
For Cost Level III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.31.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.
See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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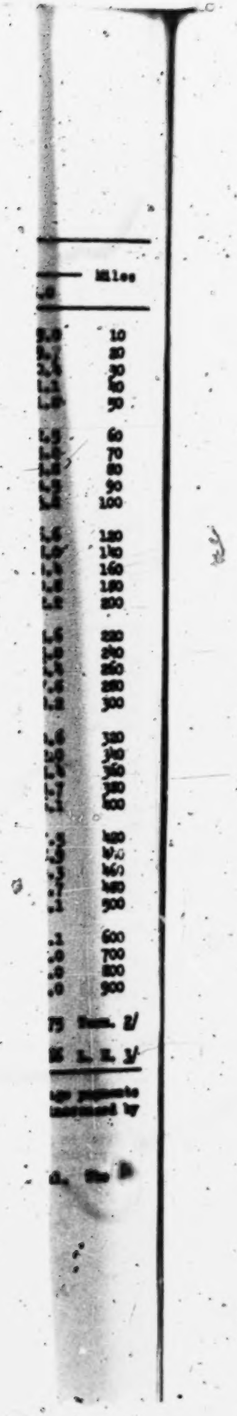

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Territory No. 2 - Eastern, excl. N. E.
& No. Ill.

BOX CARS

TABLE 8.—TERRITORY NO. 2 - EASTERN, excluding New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.1	16.8	14.4	12.6	11.2	10.1	9.2	8.4	7.8	7.2	6.8	6.3	6.0	5.6	5.3	5.1	4.8	4.6	4.4	4.3	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	10
20	21.1	17.6	15.1	13.3	11.8	10.6	9.7	8.9	8.2	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	20
30	22.1	18.5	15.9	13.9	12.4	11.2	10.2	9.3	8.6	8.0	7.5	7.1	6.7	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.6	3.5	3.4	30
40	23.1	19.3	16.6	14.6	13.0	11.7	10.7	9.8	9.1	8.4	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.3	5.0	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.7	3.6	40
50	24.1	20.2	17.3	15.2	13.6	12.2	11.2	10.3	9.5	8.9	8.3	7.8	7.4	7.0	6.6	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9	50
60	25.1	21.0	18.1	15.9	14.2	12.8	11.7	10.7	9.9	9.3	8.7	8.2	7.7	7.3	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.6	4.4	4.3	4.2	4.1	60
70	26.1	21.9	18.8	16.5	14.7	13.3	12.2	11.2	10.4	9.7	9.1	8.5	8.0	7.6	7.2	6.9	6.6	6.3	6.1	5.8	5.6	5.4	5.3	5.1	4.9	4.8	4.6	4.5	4.4	4.3	70
80	27.2	22.7	19.6	17.2	15.3	13.9	12.7	11.6	10.8	10.1	9.4	8.9	8.4	8.0	7.6	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.7	4.6	4.5	80
90	28.2	23.6	20.3	17.8	15.9	14.4	13.2	12.1	11.2	10.5	9.8	9.2	8.7	8.3	7.9	7.5	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.6	5.4	5.2	5.1	4.9	4.8	4.7	90
100	29.2	24.4	21.0	18.5	16.5	14.9	13.6	12.6	11.7	10.9	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.0	4.9	100
120	31.2	26.1	22.5	19.8	17.7	16.0	14.6	13.5	12.5	11.7	11.0	10.3	9.8	9.3	8.8	8.4	8.1	7.8	7.5	7.2	6.9	6.7	6.5	6.3	6.1	5.9	5.8	5.6	5.5	5.3	120
140	33.2	27.8	24.0	21.1	18.9	17.1	15.6	14.4	13.4	12.5	11.7	11.1	10.5	9.9	9.5	9.0	8.7	8.3	8.0	7.7	7.4	7.2	7.0	6.8	6.6	6.4	6.2	6.0	5.9	5.7	140
160	35.2	29.5	25.5	22.4	20.1	18.2	16.6	15.3	14.2	13.3	12.5	11.8	11.2	10.6	10.1	9.7	9.3	8.9	8.5	8.2	8.0	7.7	7.5	7.2	7.0	6.8	6.6	6.5	6.3	6.2	160
180	37.2	31.2	26.9	23.7	21.2	19.2	17.6	16.3	15.1	14.1	13.3	12.5	11.9	11.3	10.7	10.3	9.8	9.5	9.1	8.8	8.5	8.2	7.9	7.7	7.5	7.3	7.1	6.9	6.7	6.6	180
200	39.2	32.9	28.4	25.0	22.4	20.3	18.6	17.2	16.0	14.9	14.0	13.2	12.5	11.9	11.4	10.9	10.4	10.0	9.6	9.3	9.0	8.7	8.4	8.2	7.9	7.7	7.5	7.3	7.2	7.0	200
220	41.2	34.6	29.9	26.3	23.6	21.4	19.6	18.1	16.8	15.7	14.8	14.0	13.2	12.6	12.0	11.5	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.7	8.4	8.2	8.0	7.8	7.6	7.4	220
240	43.2	36.3	31.4	27.7	24.8	22.5	20.6	19.0	17.7	16.5	15.6	14.7	13.9	13.3	12.6	12.1	11.6	11.2	10.7	10.4	10.0	9.7	9.4	9.1	8.9	8.6	8.4	8.2	8.0	7.8	240
260	45.2	38.0	32.8	29.0	26.0	23.5	21.6	19.9	18.5	17.4	16.3	15.4	14.6	13.9	13.3	12.7	12.2	11.7	11.3	10.9	10.5	10.2	9.9	9.6	9.3	9.1	8.9	8.6	8.4	8.2	260
280	47.2	39.7	34.3	30.3	27.1	24.6	22.6	20.9	19.4	18.2	17.1	16.1	15.3	14.6	13.9	13.3	12.8	12.3	11.8	11.4	11.1	10.7	10.4	10.1	9.8	9.6	9.3	9.1	8.9	8.7	280
300	49.2	41.4	35.8	31.6	28.3	25.7	23.6	21.8	20.3	19.0	17.8	16.9	16.0	15.2	14.5	13.9	13.4	12.9	12.4	12.0	11.6	11.2	10.9	10.6	10.3	10.0	9.8	9.5	9.3	9.1	300
320	51.2	43.1	37.3	32.9	29.5	26.8	24.5	22.7	21.1	19.8	18.6	17.6	16.7	15.9	15.2	14.5	14.0	13.4	12.9	12.5	12.1	11.7	11.4	11.0	10.7	10.5	10.2	9.9	9.7	9.5	320
340	53.2	44.8	38.7	34.2	30.7	27.8	25.5	23.6	22.0	20.6	19.4	18.3	17.4	16.6	15.8	15.1	14.5	14.0	13.5	13.0	12.6	12.2	11.9	11.5	11.2	10.9	10.6	10.4	10.1	9.9	340
360	55.2	46.5	40.2	35.5	31.8	28.9	26.5	24.5	22.8	21.4	20.1	19.0	18.1	17.2	16.4	15.8	15.1	14.6	14.0	13.6	13.1	12.7	12.3	12.0	11.7	11.4	11.1	10.8	10.6	10.3	360
380	57.3	48.2	41.7	36.8	33.0	30.0	27.5	25.5	23.7	22.2	20.9	19.8	18.8	17.9	17.1	16.4	15.7	15.1	14.6	14.1	13.6	13.2	12.8	12.5	12.1	11.8	11.5	11.3	11.0	10.8	380
400	59.3	49.9	43.2	38.1	34.2	31.1	28.5	26.4	24.6	23.0	21.7	20.5	19.5	18.5	17.7	17.0	16.3	15.7	15.1	14.6	14.2	13.7	13.3	12.9	12.6	12.3	12.0	11.7	11.4	11.2	400
420	61.3	51.6	44.6	39.4	35.4	32.1	29.5	27.3	25.4	23.8	22.4	21.2	20.2	19.2	18.4	17.6	16.9	16.3	15.7	15.2	14.7	14.2	13.8	13.4	13.1	12.7	12.4	12.1	11.8	11.6	420
440	63.3	53.3	46.1	40.7	36.6	33.2	30.5	28.2	26.3	24.6	23.2	22.0	20.8	19.9	19.0	18.2	17.5	16.8	16.2	15.7	15.2	14.7	14.3	13.9	13.5	13.2	12.9	12.6	12.3	12.0	440
460	65.3	55.0	47.8	42.0	37.7	34.3	31.5	29.1	27.1	25.4	24.0	22.7	21.6	20.5	19.6	18.8	18.1	17.4	16.8	16.2	15.7	15.2	14.8	14.4	14.0	13.6	13.3	13.0	12.7	12.4	460
480	67.3	56.7	49.1	43.4	38.9	35.4	32.5	30.1	28.0	26.3	24.7	23.4	22.2	21.2	20.3	19.4	18.7	18.0	17.3	16.8	16.2	15.7	15.3	14.9	14.5	14.1	13.8	13.4	13.1	12.8	480
500	69.3	58.3	50.5	44.7	40.1	36.4	33.5	31.0	28.9	27.1	25.5	24.1	22.9	21.8	20.9	20.0	19.2	18.5	17.9	17.3	16.7	16.2	15.8	15.3	14.9	14.5	14.2	13.9	13.6	13.3	500
600	79.3	66.8	57.9	51.2	46.0	41.8	38.4	35.6	33.2	31.1	29.3	27.8	26.4	25.2	24.1	23.1	22.2	21.4	20.6	19.9	19.3	18.7	18.2	17.7	17.3	16.8	16.4	16.0	15.7	15.4	600
700	89.4	75.3	65.3	57.7	51.9	47.2	43.4	40.2	37.5	35.2	33.1	31.4	29.8	28.5	27.2	26.1	25.1	24.2	23.4	22.6	21.9	21.3	20.7	20.1	19.6	19.1	18.6	18.2	17.8	17.4	700
800	99.4	83.8	72.4	64.3	57.8	52.6	48.3	44.8	41.8	39.2	37.0	35.0	33.3	31.8	30.4	29.2	28.1	27.0	26.1	25.3	24.5	23.8	23.1	22.5	21.9	21.4	20.9	20.4	19.9	19.5	800
900	109.4	92.3	80.0	70.8	63.7	58.0	53.3	49.4	46.1	43.3	40.8	38.7	36.8	35.1	33.6	32.2	31.0	29.9	28.9	27.9	27.1	26.3	25.5	24.9	24.2	23.6	23.1	22.6	22.1	21.6	900
1000	119.5	100.8	87.4	77.4	69.6	63.3	58.2	54.0	50.4	47.3	44.6	42.3	40.2	38.4	36.7	35.3	33.9	32.7	31.6	30.6	29.7	28.8	28.0	27.2	26.6	25.9	25.3	24.7	24.2	23.7	1000
1100	129.5	109.2	94.8	83.9	75.5	68.7	63.2	58.6	54.7	51.3	48.4	45.9	43.7	41.7	39.9	38.3	36.9	35.6	34.4	33.3	32.2	31.3	30.4	29.6	28.9	28.2	27.5	26.9	26.3	25.8	1100
1200	139.5	117.7	102.1	90.5	81.4	74.1	68.1	63.2	59.0	55.4	52.3	49.5	47.1	45.0	43.1	41.4	39.8	38.4	37.1	35.9	34.8	33.8	32.9	32.0	31.2	30.5	29.8	29.1	28.5	27.9	1200
1300	149.6	126.2	109.5	97.0	87.3	79.5	73.1	67.8	63.3	59.4	56.1	53.2	50.6	48.3	46.3	44.4	42.7	41.2	39.8	38.6	37.4	36.3	35.3	34.4	33.5	32.7	32.0	31.3	30.6	30.0	1300
1400	159.6	134.7	116.9	103.5	93.2	84.8	78.0	72.4	67.6	63.5	60.0	56.8	54.1	51.6	49.4	47.5	45.7	44.1	42.6	41.2	40.0	38.8	37.8	36.8	35.9	35.0	34.2	33.4	32.7	32.1	1400
1500	169.6	143.2	124.3	110.1	99.0	90.2	83.0	77.0	71.9	67.5	63.7	60.4	57.5	54.9	52.6	50.5	48.6	46.9	45.3	43.9	42.6	41.3	40.2	39.2	38.2	37.3	36.4	35.6	34.9	34.2	1500
Term. 2/	19.122	15.935	13.659	11.951	10.623	9.561	8.692	7.968	7.355	6.829	6.374	5.976	5.624	5.312	5.032	4.781	4.553	4.346	4.157	3.984	3.824	3.677	3.541	3.415	3.297	3.187	3.084	2.988	2.897	2.812	Term. 2/
L. H. 3/	.100350	.084825	.073736	.065419	.058950	.053775	.049541	.046013	.043027	.040408	.038250	.036309	.034597	.033075	.031713	.030488	.029379	.028370	.027450	.026606	.025830	.025113	.024450	.023834	.023260	.022725	.022224	.021755	.021314	.020899	L. H. 3/

1/ Based on a tare weight of 23.3 tons and a ratio of empty car miles to loaded car miles of 0.350. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.13.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.46.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.60.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 8 (Concluded).—TERRITORY NO. 2 - EASTERN, excluding New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.9	2.9	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	10
20	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	20
30	3.3	3.3	3.2	3.1	3.0	3.0		2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	30
40	3.6	3.5	3.4	3.3	3.2	3.1		3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	40
50	3.8	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	50
60	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	60
70	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	70
80	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	80
90	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	90
100	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	100
120	5.2	5.1	5.0	4.9	4.7	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	120
140	5.6	5.5	5.4	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	140
160	6.0	5.9	5.8	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	160
180	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	180
200	6.8	6.7	6.5	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	4.6	4.6	4.6	4.5	4.5	4.4	4.4	200
220	7.2	7.1	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	4.7	220
240	7.7	7.5	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	5.0	5.0	240
260	8.1	7.9	7.7	7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.4	5.3	5.3	260
280	8.5	8.3	8.1	8.0	7.8	7.7	7.5	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.7	5.6	5.5	280
300	8.9	8.7	8.5	8.4	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.1	6.0	6.0	5.9	5.8	300
320	9.3	9.1	8.9	8.7	8.6	8.4	8.3	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.2	6.1	320
340	9.7	9.5	9.3	9.1	9.0	8.8	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.5	6.5	6.4	340
360	10.1	9.9	9.7	9.5	9.3	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.8	6.7	360
380	10.5	10.3	10.1	9.9	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.1	7.0	380
400	10.9	10.7	10.5	10.3	10.1	9.9	9.8	9.6	9.4	9.3	9.1	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	7.4	7.3	400
420	11.3	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.6	9.5	9.4	9.2	9.1	9.0	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.8	7.7	7.6	7.6	420
440	11.8	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.6	9.4	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.3	8.2	8.1	8.0	7.9	7.9	440
460	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.0	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1	8.9	8.8	8.7	8.7	8.6	8.5	8.4	8.3	8.2	8.2	460
480	12.6	12.3	12.1	11.9	11.6	11.4	11.2	11.1	10.9	10.7	10.5	10.4	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	480
500	13.0	12.7	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.7	10.6	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	500
600	15.0	14.7	14.5	14.2	13.9	13.7	13.5	13.2	13.0	12.8	12.7	12.5	12.3	12.1	12.0	11.8	11.7	11.5	11.4	11.3	11.1	11.0	10.9	10.8	10.7	10.6	10.5	10.4	10.3	10.2	600
700	17.1	16.8	16.4	16.1	15.9	15.6	15.3	15.1	14.8	14.6	14.4	14.2	14.0	13.8	13.6	13.5	13.3	13.1	13.0	12.8	12.7	12.6	12.5	12.3	12.2	12.1	12.0	11.8	11.7	11.6	700
800	19.1	18.8	18.4	18.1	17.8	17.5	17.2	16.9	16.6	16.4	16.2	15.9	15.7	15.5	15.3	15.1	14.9	14.8	14.6	14.4	14.3	14.1	14.0	13.8	13.7	13.6	13.4	13.3	13.2	13.1	800
900	21.2	20.8	20.4	20.0	19.7	19.3	19.0	18.7	18.5	18.2	17.9	17.7	17.4	17.2	17.0	16.8	16.6	16.4	16.2	16.0	15.8	15.7	15.5	15.4	15.2	15.1	14.9	14.8	14.7	14.5	900
1000	23.2	22.8	22.4	22.0	21.6	21.2	20.9	20.5	20.3	20.0	20.0	19.4	19.1	18.9	18.7	18.4	18.2	18.0	17.8	17.6	17.4	17.2	17.0	16.9	16.7	16.6	16.4	16.3	16.1	16.0	1000
1100	25.3	24.8	24.4	23.9	23.5	23.1	22.7	22.4	22.1	21.7	21.4	21.1	20.9	20.6	20.3	20.1	19.8	19.6	19.4	19.2	19.0	18.8	18.6	18.4	18.2	18.1	17.9	17.7	17.6	17.4	1100
1200	27.3	26.8	26.3	25.9	25.4	25.0	24.6	24.2	23.9	23.5	23.2	22.9	22.6	22.3	22.0	21.7	21.5	21.2	21.0	20.8	20.5	20.3	20.1	19.9	19.7	19.5	19.4	19.2	19.0	18.9	1200
1300	29.4	28.8	28.3	27.8	27.3	26.9	26.5	26.1	25.7	25.3	24.9	24.6	24.3	24.0	23.7	23.4	23.1	22.8	22.6	22.3	22.1	21.9	21.7	21.4	21.2	21.0	20.8	20.7	20.5	20.3	1300
1400	31.4	30.8	30.3	29.8	29.3	28.8	28.3	27.9	27.5	27.1	26.7	26.3	26.0	25.7	25.3	25.0	24.7	24.5	24.2	23.9	23.7	23.4	23.2	23.0	22.8	22.5	22.3	22.1	21.9	21.8	1400
1500	33.5	32.9	32.3	31.7	31.2	30.7	30.2	29.7	29.3	28.9	28.5	28.1	27.7	27.3	27.0	26.7	26.4	26.1	25.8	25.5	25.2	25.0	24.7	24.5	24.3	24.0	23.8	23.6	23.4	23.2	1500
Term. 2/	2.732	2.686	2.584	2.516	2.452	2.390	2.332	2.276	2.223	2.173	2.125	2.078	2.034	1.992	1.951	1.912	1.875	1.839	1.804	1.771	1.738	1.707	1.677	1.648	1.621	1.594	1.567	1.542	1.518	1.494	Term. 2/
L. H. 3/	.020507	.020138	.019788	.019457	.019142	.018844	.018560	.018289	.018031	.017785	.017550	.017325	.017110	.016903	.016705	.016515	.016332	.016157	.015988	.015825	.015668	.015517	.015371	.015230	.015094	.014963	.014835	.014712	.014593	.014477	L. H. 3/

1/ Based on a tare weight of 23.3 tons and a ratio of empty car miles to loaded car miles of 0.350. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.13.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.46.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.60.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 2 - Eastern, excl. N. E. & No. Ill.

FLAT CARS

TABLE 9.—TERRITORY NO. 2 - EASTERN, excluding New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.4	17.0	14.6	12.8	11.4	10.2	9.3	8.5	7.9	7.3	6.8	6.4	6.0	5.7	5.4	5.2	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.3	3.2	3.2	3.1	10
20	21.7	18.1	15.5	13.6	12.1	10.9	9.9	9.1	8.4	7.8	7.3	6.9	6.5	6.1	5.8	5.5	5.3	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	3.3	20
30	22.9	19.1	16.4	14.4	12.8	11.6	10.5	9.7	9.0	8.3	7.8	7.3	6.9	6.5	6.2	5.9	5.6	5.4	5.2	4.9	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	30
40	24.2	20.2	17.4	15.2	13.6	12.2	11.2	10.3	9.5	8.8	8.3	7.8	7.3	6.9	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	3.9	3.8	40
50	25.5	21.3	18.3	16.1	14.3	12.9	11.8	10.8	10.0	9.3	8.7	8.2	7.7	7.3	7.0	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.1	50
60	26.7	22.4	19.2	16.9	15.0	13.6	12.4	11.4	10.6	9.8	9.2	8.7	8.2	7.7	7.4	7.0	6.7	6.4	6.2	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.5	4.4	4.3	60
70	28.0	23.4	20.2	17.7	15.8	14.3	13.0	12.0	11.1	10.3	9.7	9.1	8.6	8.1	7.7	7.4	7.1	6.8	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.7	4.5	70
80	29.3	24.5	21.1	18.5	16.5	14.9	13.6	12.5	11.6	10.8	10.1	9.5	9.0	8.5	8.1	7.8	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	80
90	30.5	25.6	22.0	19.3	17.3	15.6	14.2	13.1	12.1	11.3	10.6	10.0	9.4	9.0	8.5	8.1	7.8	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.0	90
100	31.8	26.6	22.9	20.2	18.0	16.3	14.9	13.7	12.7	11.8	11.1	10.4	9.9	9.4	8.9	8.5	8.1	7.8	7.5	7.2	6.9	6.7	6.5	6.3	6.1	5.9	5.7	5.6	5.4	5.3	100
120	34.4	28.8	24.8	21.8	19.5	17.6	16.1	14.8	13.7	12.8	12.0	11.3	10.7	10.2	9.7	9.2	8.8	8.5	8.1	7.8	7.6	7.3	7.1	6.8	6.6	6.4	6.3	6.1	5.9	5.8	120
140	36.9	30.9	26.6	23.4	20.9	19.0	17.3	16.0	14.8	13.8	13.0	12.2	11.6	11.0	10.5	10.0	9.6	9.2	8.8	8.5	8.2	7.9	7.7	7.4	7.2	7.0	6.8	6.6	6.4	6.3	140
160	39.4	33.1	28.5	25.1	22.4	20.3	18.6	17.1	15.9	14.8	13.9	13.1	12.4	11.8	11.2	10.7	10.3	9.9	9.5	9.1	8.8	8.5	8.2	8.0	7.8	7.5	7.3	7.1	7.0	6.8	160
180	42.0	35.2	30.4	26.7	23.9	21.6	19.8	18.2	16.9	15.8	14.9	14.0	13.3	12.6	12.0	11.5	11.0	10.5	10.1	9.8	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.3	180
200	44.5	37.3	32.2	28.4	25.4	23.0	21.0	19.4	18.0	16.8	15.8	14.9	14.1	13.4	12.8	12.2	11.7	11.2	10.8	10.4	10.1	9.7	9.4	9.1	8.9	8.6	8.4	8.2	8.0	7.8	200
220	47.0	39.5	34.1	30.0	26.8	24.3	22.2	20.5	19.1	17.8	16.7	15.8	15.0	14.2	13.5	13.0	12.4	11.9	11.5	11.1	10.7	10.3	10.0	9.7	9.4	9.2	8.9	8.7	8.5	8.3	220
240	49.6	41.6	35.9	31.6	28.3	25.7	23.5	21.7	20.1	18.8	17.7	16.7	15.8	15.0	14.3	13.7	13.1	12.6	12.1	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.4	9.2	9.0	8.8	240
260	52.1	43.8	37.8	33.3	29.8	27.0	24.7	22.8	21.2	19.8	18.6	17.6	16.7	15.8	15.1	14.4	13.8	13.3	12.8	12.3	11.9	11.5	11.2	10.8	10.5	10.2	10.0	9.7	9.5	9.3	260
280	54.7	45.9	39.6	34.9	31.3	28.3	25.9	24.0	22.3	20.8	19.6	18.5	17.5	16.6	15.9	15.2	14.6	14.0	13.5	13.0	12.5	12.1	11.8	11.4	11.1	10.8	10.5	10.2	10.0	9.8	280
300	57.2	48.0	41.5	36.6	32.7	29.7	27.2	25.1	23.3	21.8	20.5	19.4	18.3	17.5	16.6	15.9	15.3	14.7	14.1	13.6	13.2	12.7	12.4	12.0	11.7	11.3	11.0	10.8	10.5	10.3	300
320	59.7	50.2	43.3	38.2	34.2	31.0	28.4	26.2	24.4	22.8	21.5	20.3	19.2	18.3	17.4	16.7	16.0	15.4	14.8	14.3	13.8	13.4	12.9	12.6	12.2	11.9	11.6	11.3	11.0	10.8	320
340	62.3	52.3	45.2	39.8	35.7	32.4	29.6	27.4	25.5	23.8	22.4	21.1	20.0	19.1	18.2	17.4	16.7	16.0	15.5	14.9	14.4	14.0	13.5	13.1	12.8	12.4	12.1	11.8	11.5	11.2	340
360	64.8	54.4	47.0	41.3	37.2	33.7	30.9	28.5	26.5	24.8	23.3	22.0	20.9	19.9	19.0	18.1	17.4	16.7	16.1	15.6	15.0	14.6	14.1	13.7	13.3	13.0	12.6	12.3	12.0	11.7	360
380	67.4	56.6	48.9	43.1	38.6	35.0	32.1	29.7	27.6	25.8	24.3	22.9	21.7	20.7	19.7	18.9	18.1	17.4	16.8	16.2	15.7	15.2	14.7	14.3	13.9	13.5	13.2	12.9	12.5	12.2	380
400	69.9	58.7	50.8	44.8	40.1	36.4	33.3	30.8	28.7	26.8	25.2	23.8	22.6	21.5	20.5	19.6	18.8	18.1	17.4	16.8	16.3	15.8	15.3	14.8	14.4	14.0	13.7	13.4	13.0	12.7	400
420	72.4	60.9	52.6	46.4	41.6	37.7	34.6	31.9	29.7	27.8	26.2	24.7	23.4	22.3	21.3	20.4	19.6	18.8	18.1	17.5	16.9	16.4	15.9	15.4	15.0	14.6	14.2	13.9	13.5	13.2	420
440	75.0	63.0	54.5	48.0	43.1	39.1	35.8	33.1	30.8	28.8	27.1	25.6	24.3	23.1	22.1	21.1	20.3	19.5	18.8	18.1	17.5	17.0	16.5	16.0	15.5	15.1	14.7	14.4	14.0	13.7	440
460	77.5	65.1	56.3	49.7	44.5	40.4	37.0	34.2	31.9	29.8	28.0	26.5	25.1	23.9	22.8	21.9	21.0	20.2	19.4	18.8	18.2	17.6	17.1	16.6	16.1	15.7	15.3	14.9	14.6	14.2	460
480	80.1	67.3	58.2	51.3	46.0	41.8	38.3	35.4	32.9	30.8	29.0	27.4	26.0	24.7	23.6	22.6	21.7	20.9	20.1	19.4	18.8	18.2	17.6	17.1	16.7	16.2	15.8	15.4	15.1	14.7	480
500	82.6	69.4	60.0	53.0	47.5	43.1	39.5	36.5	34.0	31.8	29.9	28.3	26.8	25.5	24.4	23.3	22.4	21.6	20.8	20.1	19.4	18.8	18.2	17.7	17.2	16.8	16.3	15.9	15.6	15.2	500
600	95.3	80.1	69.3	61.2	54.9	49.8	45.7	42.2	39.3	36.8	34.6	32.7	31.1	29.6	28.3	27.1	26.0	25.0	24.1	23.3	22.5	21.8	21.2	20.6	20.0	19.5	19.0	18.5	18.1	17.7	600
700	108.0	90.8	78.6	69.4	62.2	56.5	51.8	47.9	44.6	41.8	39.4	37.2	35.3	33.6	32.1	30.8	29.6	28.4	27.4	26.5	25.6	24.8	24.1	23.4	22.8	22.2	21.6	21.1	20.6	20.2	700
800	120.7	101.5	87.8	77.6	69.6	63.2	58.0	53.6	50.0	46.8	44.1	41.7	39.6	37.7	36.0	34.5	33.1	31.9	30.7	29.7	28.7	27.0	26.3	26.3	25.6	24.9	24.3	23.7	23.2	22.7	800
900	133.4	112.2	97.1	85.8	77.0	69.9	64.2	59.4	55.3	51.8	48.8	46.1	43.8	41.7	39.9	38.2	36.7	35.3	34.1	32.9	31.9	30.9	30.0	29.1	28.4	27.6	26.9	26.3	25.7	25.1	900
1000	146.1	122.9	106.4	94.0	84.3	76.6	70.3	65.1	60.6	56.8	53.5	50.6	48.0	45.8	43.7	41.9	40.3	38.8	37.4	36.1	35.0	33.9	32.9	32.0	31.1	30.3	30.0	28.9	28.2	27.6	1000
1100	158.8	133.6	115.7	102.2	91.7	83.3	76.5	70.8	65.9	61.8	58.2	55.1	52.3	49.8	47.6	45.6	43.8	42.2	40.7	39.3	38.1	36.9	35.9	34.9	33.9	33.1	32.2	31.5	30.8	30.1	1100
1200	171.5	144.3	124.9	110.4	99.1	90.0	82.6	76.5	71.3	66.8	62.9	59.5	56.5	53.9	51.5	49.3	47.4	45.6	44.0	42.6	41.2	39.9	38.8	37.7	36.7	35.8	34.9	34.1	33.3	32.6	1200
1300	184.1	155.0	134.2	118.6	106.5	96.8	88.8	82.2	76.6	71.8	67.6	64.0	60.8	57.9	55.4	53.1	51.0	49.1	47.4	45.8	44.3	43.0	41.7	40.6	39.5	38.5	37.6	36.7	35.8	35.1	1300
1400	196.8	165.7	143.5	126.8	113.8	103.5	95.0	87.9	81.9	76.8	72.3	68.4	65.0	62.0	59.2	56.8	54.5	52.5	50.7	49.0	47.4	46.0	44.7	43.4	42.2	41.2	40.2	39.3	38.4	37.5	1400
1500	209.5	176.4	152.8	135.0	121.2	110.2	101.1	93.6	87.2	81.8	77.0	72.9	69.3	66.0	63.1	60.5	58.1	56.0	54.0	52.2	50.5	49.0	47.6	46.3	45.1	43.9	42.9	41.8	40.9	40.0	1500
Term. 2/	19.122	15.935	13.659	11.951	10.623	9.561	8.692	7.968	7.355	6.829	6.374	5.976	5.624	5.312	5.032	4.781	4.553	4.346	4.157	3.984	3.824	3.677	3.541	3.415	3.297	3.187	3.084	2.988	2.897	2.812	Term. 2/
L. H. 3/	.126940	.106983	.092729	.082038	.073722	.067070	.061627	.057092	.053254	.049964	.047113	.044619	.042418	.040461	.038711	.037135	.035710	.034414	.033230	.032146	.031148	.030227	.029374	.028582	.027845	.027157	.026513	.025909	.025342	.024809	L. H. 3/

1/ Based on a tare weight of 20.6 tons and a ratio of empty car miles to loaded car miles of 0.839. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.13.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.46.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.60.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 9 (Concluded).—TERRITORY NO. 2 - EASTERN, excluding New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	10
20	3.2	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	20
30	3.5	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	30
40	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	40
50	3.9	3.8	3.8	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	50
60	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	60
70	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	70
80	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.9	2.8	80
90	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	90
100	5.2	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.1	100
120	5.6	5.5	5.4	5.3	5.2	5.1	4.9	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	120
140	6.1	6.0	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.9	3.8	140
160	6.6	6.5	6.3	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.2	4.1	160
180	7.1	6.9	6.8	6.6	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	180
200	7.6	7.4	7.3	7.1	7.0	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	200
220	8.1	7.9	7.7	7.6	7.4	7.3	7.1	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.3	5.2	5.1	220
240	8.6	8.4	8.2	8.0	7.9	7.7	7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.5	240
260	9.1	8.9	8.7	8.5	8.3	8.2	8.0	7.9	7.7	7.6	7.5	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	260
280	9.5	9.3	9.1	8.9	8.8	8.6	8.4	8.3	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	6.1	280
300	10.0	9.8	9.6	9.4	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	300
320	10.5	10.3	10.1	9.9	9.7	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	6.9	6.9	6.8	320
340	11.0	10.8	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.2	9.1	9.0	8.8	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	340
360	11.5	11.2	11.0	10.8	10.6	10.4	10.2	10.0	9.8	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.2	8.1	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.5	360
380	12.0	11.7	11.5	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	380
400	12.5	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.9	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	400
420	12.9	12.7	12.4	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	420
440	13.4	13.1	12.9	12.6	12.4	12.1	11.9	11.7	11.5	11.3	11.1	11.0	10.8	10.6	10.5	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	440
460	13.9	13.6	13.3	13.1	12.8	12.6	12.4	12.1	11.9	11.7	11.6	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	460
480	14.4	14.1	13.8	13.5	13.3	13.0	12.8	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	480
500	14.9	14.6	14.3	14.0	13.7	13.5	13.2	13.0	12.8	12.6	12.4	12.2	12.0	11.8	11.7	11.5	11.3	11.2	11.1	10.9	10.8	10.7	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	500
600	17.3	17.0	16.6	16.3	16.0	15.7	15.4	15.1	14.9	14.7	14.4	14.2	14.0	13.8	13.6	13.4	13.2	13.1	12.9	12.7	12.6	12.4	12.3	12.2	12.0	11.9	11.8	11.7	11.5	11.4	600
700	19.7	19.3	19.0	18.6	18.2	17.9	17.6	17.3	17.0	16.7	16.5	16.2	16.0	15.8	15.5	15.3	15.1	14.9	14.8	14.6	14.4	14.2	14.1	13.9	13.8	13.6	13.5	13.3	13.2	13.1	700
800	22.2	21.7	21.3	20.9	20.5	20.1	19.8	19.4	19.1	18.8	18.5	18.3	18.0	17.7	17.5	17.3	17.0	16.8	16.6	16.4	16.2	16.0	15.8	15.7	15.5	15.3	15.2	15.0	14.9	14.7	800
900	24.6	24.1	23.6	23.2	22.7	22.3	22.0	21.6	21.2	20.9	20.6	20.3	20.0	19.7	19.4	19.2	18.9	18.7	18.5	18.2	18.0	17.8	17.6	17.4	17.2	17.1	16.9	16.7	16.6	16.4	900
1000	27.0	26.5	26.0	25.5	25.0	24.6	24.1	23.7	23.3	23.0	22.6	22.3	22.0	21.7	21.4	21.1	20.8	20.6	20.3	20.1	19.8	19.6	19.4	19.2	19.0	18.8	18.6	18.4	18.2	18.0	1000
1100	29.5	28.9	28.3	27.8	27.3	26.8	26.3	25.9	25.5	25.1	24.7	24.3	24.0	23.6	23.3	23.0	22.7	22.4	22.1	21.9	21.6	21.4	21.2	20.9	20.7	20.5	20.3	20.1	19.9	19.7	1100
1200	31.9	31.3	30.6	30.1	29.5	29.0	28.5	28.0	27.6	27.1	26.7	26.3	26.0	25.6	25.3	24.9	24.6	24.3	24.0	23.7	23.4	23.2	22.9	22.7	22.4	22.2	22.0	21.8	21.6	21.4	1200
1300	34.3	33.6	33.0	32.4	31.8	31.2	30.7	30.2	30.0	29.2	28.8	28.4	28.0	27.6	27.2	26.8	26.5	26.2	25.8	25.5	25.2	25.0	24.7	24.4	24.2	23.9	23.7	23.5	23.2	23.0	1300
1400	36.8	36.0	35.3	34.7	34.0	33.4	32.9	32.3	31.8	31.3	30.8	30.4	29.9	29.5	29.1	28.8	28.4	28.0	27.7	27.4	27.1	26.8	26.5	26.2	25.9	25.6	25.4	25.1	24.9	24.7	1400
1500	39.2	38.4	37.7	36.9	36.3	35.6	35.0	34.5	33.9	33.4	32.9	32.4	31.9	31.5	31.1	30.7	30.3	29.9	29.5	29.2	28.9	28.5	28.2	27.9	27.6	27.4	27.1	26.8	26.6	26.3	1500
Term. 2/	2.732	2.656	2.584	2.516	2.452	2.390	2.332	2.276	2.223	2.173	2.125	2.078	2.034	1.992	1.951	1.912	1.875	1.839	1.804	1.771	1.738	1.707	1.677	1.648	1.621	1.594	1.567	1.542	1.518	1.494	Term. 2/
L. H. 3/	.024306	.023831	.023381	.022955	.022551	.022168	.021802	.021455	.021123	.020807	.020504	.020215	.019938	.019673	.019418	.019174	.018939	.018713	.018496	.018287	.018085	.017891	.017704	.017522	.017347	.017178	.017015	.016856	.016703	.016555	L. H. 3/

1/ Based on a tare weight of 20.6 tons and a ratio of empty car miles to loaded car miles of 0.839. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.13.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.46.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.60.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 2 - Western, excl. N. E. & No. III.

CONDOLA AND HOPPER CARS

TABLE 10.—TERRITORY NO. 2 - EASTERN, excluding New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.4	17.0	14.6	12.8	11.4	10.3	9.3	8.6	7.9	7.3	6.9	6.4	6.1	5.7	5.4	5.2	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	10
20	21.7	18.1	15.6	13.6	12.1	10.9	10.0	9.1	8.5	7.9	7.3	6.9	6.5	6.1	5.8	5.5	5.3	5.1	4.8	4.6	4.5	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	3.3	20
30	23.1	19.3	16.5	14.5	12.9	11.6	10.6	9.7	9.0	8.4	7.8	7.4	6.9	6.6	6.2	5.9	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.2	4.0	3.9	3.8	3.7	3.6	30
40	24.4	20.4	17.5	15.3	13.7	12.3	11.2	10.3	9.6	8.9	8.3	7.8	7.4	7.0	6.6	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.1	3.9	3.8	40
50	25.7	21.5	18.4	16.2	14.4	13.0	11.9	10.9	10.1	9.4	8.8	8.3	7.8	7.4	7.0	6.7	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	4.1	50
60	27.0	22.6	19.4	17.0	15.2	13.7	12.5	11.5	10.6	9.9	9.3	8.7	8.2	7.8	7.4	7.1	6.8	6.5	6.2	6.0	5.7	5.5	5.4	5.2	5.0	4.9	4.7	4.6	4.5	4.3	60
70	28.3	23.7	20.4	17.9	15.9	14.4	13.1	12.1	11.2	10.4	9.8	9.2	8.7	8.2	7.8	7.5	7.1	6.8	6.5	6.3	6.1	5.8	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	70
80	29.6	24.8	21.3	18.7	16.7	15.1	13.8	12.7	11.7	10.9	10.3	9.7	9.1	8.6	8.2	7.8	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.8	80
90	30.9	25.9	22.3	19.6	17.5	15.8	14.4	13.3	12.3	11.5	10.7	10.1	9.6	9.1	8.6	8.2	7.9	7.5	7.2	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	90
100	32.2	27.0	23.2	20.4	18.2	16.5	15.0	13.9	12.8	12.0	11.2	10.6	10.0	9.5	9.0	8.6	8.2	7.9	7.6	7.3	7.0	6.8	6.6	6.3	6.2	6.0	5.8	5.6	5.5	5.4	100
120	34.9	29.2	25.1	22.1	19.8	17.9	16.3	15.0	13.9	13.0	12.2	11.5	10.9	10.3	9.8	9.4	9.0	8.6	8.3	7.9	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.2	6.0	5.9	120
140	37.5	31.4	27.1	23.8	21.3	19.2	17.6	16.2	15.0	14.0	13.2	12.4	11.7	11.1	10.6	10.1	9.7	9.3	8.9	8.6	8.3	8.0	7.8	7.5	7.3	7.1	6.9	6.7	6.5	6.4	140
160	40.1	33.6	29.0	25.5	22.8	20.6	18.9	17.4	16.1	15.1	14.1	13.3	12.6	12.0	11.4	10.9	10.4	10.0	9.6	9.3	8.9	8.6	8.4	8.1	7.9	7.6	7.4	7.2	7.1	6.9	160
180	42.7	35.8	30.9	27.2	24.3	22.0	20.1	18.6	17.2	16.1	15.1	14.2	13.5	12.8	12.2	11.7	11.2	10.7	10.3	9.9	9.6	9.3	9.0	8.7	8.4	8.2	8.0	7.8	7.6	7.4	180
200	45.4	38.0	32.8	28.9	25.8	23.4	21.4	19.7	18.3	17.1	16.1	15.2	14.4	13.6	13.0	12.4	11.9	11.4	11.0	10.6	10.2	9.9	9.6	9.3	9.0	8.8	8.5	8.3	8.1	7.9	200
220	48.0	40.2	34.7	30.6	27.4	24.8	22.7	20.9	19.4	18.2	17.0	16.1	15.2	14.5	13.8	13.2	12.6	12.1	11.7	11.3	10.9	10.5	10.2	9.9	9.6	9.3	9.1	8.8	8.6	8.4	220
240	50.6	42.5	36.6	32.3	28.9	26.2	23.9	22.1	20.5	19.2	18.0	17.0	16.1	15.3	14.6	13.9	13.4	12.8	12.4	11.9	11.5	11.1	10.8	10.5	10.2	9.9	9.6	9.4	9.1	8.9	240
260	53.2	44.7	38.6	34.0	30.4	27.6	25.2	23.3	21.6	20.2	19.0	17.9	17.0	16.1	15.4	14.7	14.1	13.5	13.0	12.6	12.1	11.7	11.4	11.0	10.7	10.4	10.2	9.9	9.7	9.4	260
280	55.9	46.9	40.5	35.7	31.9	28.9	26.5	24.4	22.7	21.2	20.0	18.8	17.9	17.0	16.2	15.5	14.8	14.3	13.7	13.2	12.8	12.4	12.0	11.6	11.3	11.0	10.7	10.4	10.2	9.9	280
300	58.5	49.1	42.4	37.4	33.4	30.3	27.8	25.6	23.8	22.3	20.9	19.8	18.7	17.8	17.0	16.2	15.6	15.0	14.4	13.9	13.4	13.0	12.6	12.2	11.9	11.5	11.2	11.0	10.7	10.4	300
320	61.1	51.3	44.3	39.1	35.0	31.7	29.0	26.8	24.9	23.3	21.9	20.7	19.6	18.6	17.8	17.0	16.3	15.7	15.1	14.6	14.1	13.6	13.2	12.8	12.4	12.1	11.8	11.5	11.2	11.0	320
340	63.7	53.5	46.2	40.7	36.5	33.1	30.3	28.0	26.0	24.3	22.9	21.6	20.5	19.5	18.6	17.8	17.0	16.4	15.8	15.2	14.7	14.2	13.8	13.4	13.0	12.7	12.3	12.0	11.7	11.5	340
360	66.3	55.7	48.1	42.4	38.0	34.5	31.6	29.2	27.1	25.4	23.8	22.5	21.3	20.3	19.4	18.5	17.8	17.1	16.5	15.9	15.3	14.9	14.4	14.0	13.6	13.2	12.9	12.6	12.3	12.0	360
380	69.0	57.9	50.0	44.1	39.5	35.9	32.8	30.3	28.2	26.4	24.8	23.4	22.2	21.1	20.2	19.3	18.5	17.8	17.1	16.5	16.0	15.5	15.0	14.6	14.2	13.8	13.4	13.1	12.8	12.5	380
400	71.6	60.1	52.0	45.8	41.1	37.2	34.1	31.5	29.3	27.4	25.8	24.4	23.1	22.0	21.0	20.1	19.2	18.5	17.8	17.2	16.6	16.1	15.6	15.2	14.7	14.3	14.0	13.6	13.3	13.0	400
420	74.2	62.4	53.9	47.5	42.6	38.6	35.4	32.7	30.4	28.5	26.8	25.3	24.0	22.8	21.8	20.8	20.0	19.2	18.5	17.9	17.3	16.7	16.2	15.7	15.3	14.9	14.5	14.1	13.8	13.5	420
440	76.8	64.6	55.8	49.2	44.1	40.0	36.7	33.9	31.5	29.5	27.7	26.2	24.8	23.6	22.6	21.6	20.7	19.9	19.2	18.5	17.9	17.3	16.8	16.3	15.9	15.4	15.1	14.7	14.3	14.0	440
460	79.5	66.8	57.7	50.9	45.6	41.4	37.9	35.0	32.6	30.5	28.7	27.1	25.7	24.5	23.4	22.4	21.4	20.6	19.9	19.2	18.5	18.0	17.4	16.9	16.4	16.0	15.6	15.2	14.9	14.5	460
480	82.1	69.0	59.6	52.6	47.1	42.8	39.2	36.2	33.7	31.5	29.7	28.0	26.6	25.3	24.1	23.1	22.2	21.3	20.5	19.8	19.2	18.6	18.0	17.5	17.0	16.6	16.1	15.7	15.4	15.0	480
500	84.7	71.2	61.5	54.3	48.7	44.2	40.5	37.4	34.8	32.6	30.6	28.9	27.5	26.1	24.9	23.9	22.9	22.0	21.2	20.5	19.8	19.2	18.6	18.1	17.6	17.1	16.7	16.3	15.9	15.5	500
600	97.8	82.2	71.1	62.8	56.3	51.1	46.8	43.3	40.3	37.7	35.5	33.5	31.8	30.3	28.9	27.7	26.6	25.6	24.6	23.8	23.0	22.3	21.6	21.0	20.4	19.9	19.4	18.9	18.5	18.1	600
700	110.9	93.3	80.7	71.2	63.9	58.0	53.2	49.2	45.8	42.9	40.3	38.1	36.2	34.5	32.9	31.5	30.3	29.1	28.1	27.1	26.2	25.4	24.7	24.0	23.3	22.7	22.1	21.6	21.1	20.6	700
800	124.1	104.3	90.3	79.7	71.5	64.9	59.5	55.1	51.3	48.0	45.2	42.7	40.6	38.6	36.9	35.3	33.9	32.6	31.5	30.4	29.4	28.5	27.7	26.9	26.2	25.5	24.8	24.2	23.7	23.2	800
900	137.2	115.4	99.8	88.2	79.1	71.8	65.9	60.9	56.8	53.2	50.0	47.3	44.9	42.8	40.9	39.2	37.6	36.2	34.9	33.7	32.6	31.6	30.7	29.8	29.0	28.3	27.6	26.9	26.3	25.7	900
1000	150.3	126.5	109.4	96.6	86.7	78.6	72.2	66.8	62.2	58.3	54.9	51.9	49.3	47.0	44.9	43.0	41.3	39.7	38.3	37.0	35.8	34.7	33.7	32.8	31.9	31.1	30.3	29.6	28.9	28.2	1000
1100	163.4	137.5	119.0	105.1	94.3	85.7	78.6	72.7	67.7	63.5	59.8	56.5	53.7	51.1	48.8	46.8	44.9	43.3	41.7	40.3	39.0	37.8	36.7	35.7	34.7	33.8	33.0	32.2	31.5	30.8	1100
1200	176.5	148.6	128.6	113.6	101.9	92.6	85.0	78.6	73.2	68.6	64.6	61.1	58.0	55.3	52.8	50.6	48.6	46.8	45.1	43.6	42.2	40.9	39.7	38.6	37.6	36.6	35.7	34.9	34.1	33.3	1200
1300	189.7	159.6	138.1	122.0	109.5	99.5	91.3	84.5	78.7	73.8	69.5	65.7	62.4	59.4	56.8	54.4	52.3	50.3	48.6	46.9	45.4	44.0	42.7	41.6	40.4	39.4	38.4	37.5	36.7	35.9	1300
1400	202.8	170.7	147.7	130.5	117.1	106.4	97.7	90.4	84.2	78.9	74.3	70.3	66.8	63.6	60.8	58.3	56.0	53.9	52.0	50.2	48.6	47.1	45.8	44.5	43.3	42.2	41.2	40.2	39.3	38.4	1400
1500	215.9	181.7	157.3	139.0	124.7	113.3	104.0	96.3	89.7	84.0	79.2	74.9	71.1	67.8	64.8	62.1	59.6	57.4	55.4	53.5	51.8	50.2	48.8	47.4	46.2	45.0	43.9	42.8	41.9	41.0	1500
Term. 2/	19.122	15.935	13.659	11.951	10.623	9.561	8.692	7.968	7.355	6.829	6.374	5.976	5.624	5.312	5.032	4.781	4.553	4.346	4.157	3.984	3.824	3.677	3.541	3.415	3.297	3.187	3.084	2.988	2.897	2.812	Term. 2/
L. H. 3/	.131180	.110517	.095757	.084688	.076078	.069190	.063555	.058858	.054885	.051479	.048527	.045944	.043665	.041639	.039826	.038195	.036719	.035377	.034152	.033029	.031996	.031042	.030159	.029339	.028576	.027863	.027197	.026572	.025985	.025432	L. H. 3/

1/ Based on a tare weight of 22.1 tons and a ratio of empty car miles to loaded car miles of 0.843. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.13.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.46.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.60.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 10 (Concluded).—TERRITORY NO. 2 - EASTERN, excluding New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	10
20	3.2	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	20
30	3.5	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	30
40	3.7	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	40
50	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	50
60	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	60
70	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.7	2.7	2.7	70
80	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	80
90	5.0	4.9	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	90
100	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	100
120	5.7	5.6	5.5	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	120
140	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.2	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.9	140
160	6.7	6.6	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.2	160
180	7.2	7.1	6.9	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	180
200	7.7	7.5	7.4	7.2	7.1	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	200
220	8.2	8.0	7.9	7.7	7.5	7.4	7.2	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	220
240	8.7	8.5	8.3	8.2	8.0	7.8	7.7	7.5	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	240
260	9.2	9.0	8.8	8.6	8.5	8.3	8.1	8.0	7.8	7.7	7.6	7.5	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.9	260
280	9.7	9.5	9.3	9.1	8.9	8.7	8.6	8.4	8.3	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.4	6.4	6.3	6.2	280
300	10.2	10.0	9.8	9.6	9.4	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.6	300
320	10.7	10.5	10.2	10.0	9.8	9.7	9.5	9.3	9.1	9.0	8.8	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	320
340	11.2	11.0	10.7	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.8	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.3	7.2	340
360	11.7	11.4	11.2	11.0	10.8	10.6	10.4	10.2	10.0	9.8	9.7	9.5	9.4	9.2	9.1	9.0	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	360
380	12.2	11.9	11.7	11.5	11.2	11.0	10.8	10.6	10.4	10.3	10.1	9.9	9.8	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.3	8.2	8.1	8.0	7.9	380
400	12.7	12.4	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.9	9.8	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	400
420	13.2	12.9	12.6	12.4	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.8	10.6	10.4	10.3	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	420
440	13.7	13.4	13.1	12.9	12.6	12.4	12.2	11.9	11.7	11.5	11.4	11.2	11.0	10.8	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	440
460	14.2	13.9	13.6	13.3	13.1	12.8	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.4	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	460
480	14.7	14.4	14.1	13.8	13.5	13.3	13.0	12.8	12.6	12.4	12.2	12.0	11.8	11.6	11.5	11.3	11.2	11.0	10.9	10.7	10.6	10.5	10.4	10.2	10.1	10.0	9.9	9.8	9.7	9.6	480
500	15.2	14.9	14.6	14.3	14.0	13.7	13.5	13.3	13.0	12.8	12.6	12.4	12.2	12.0	11.9	11.7	11.6	11.4	11.3	11.1	11.0	10.8	10.7	10.6	10.5	10.4	10.2	10.1	10.0	9.9	500
600	17.7	17.3	17.0	16.6	16.3	16.0	15.7	15.5	15.2	14.9	14.7	14.5	14.3	14.1	13.9	13.7	13.5	13.3	13.1	13.0	12.8	12.7	12.5	12.4	12.2	12.1	12.0	11.9	11.7	11.6	600
700	20.2	19.7	19.4	19.0	18.6	18.3	18.0	17.6	17.4	17.1	16.8	16.6	16.3	16.1	15.8	15.6	15.4	15.2	15.0	14.8	14.7	14.5	14.3	14.2	14.0	13.9	13.7	13.6	13.4	13.3	700
800	22.7	22.2	21.7	21.3	20.9	20.5	20.2	19.8	19.5	19.2	18.9	18.6	18.3	18.1	17.8	17.6	17.4	17.1	16.9	16.7	16.5	16.3	16.1	16.0	15.8	15.6	15.5	15.3	15.2	15.0	800
900	25.2	24.6	24.1	23.7	23.2	22.8	22.4	22.0	21.7	21.3	21.0	20.7	20.4	20.1	19.8	19.6	19.3	19.0	18.8	18.6	18.4	18.2	17.9	17.7	17.6	17.4	17.2	17.0	16.9	16.7	900
1000	27.6	27.1	26.5	26.0	25.5	25.1	24.7	24.2	23.8	23.5	23.1	22.8	22.4	22.1	21.8	21.5	21.2	21.0	20.7	20.5	20.2	20.0	19.8	19.5	19.3	19.1	18.9	18.7	18.6	18.4	1000
1100	30.1	29.5	28.9	28.4	27.9	27.4	26.9	26.4	26.0	25.6	25.2	24.8	24.5	24.1	23.8	23.5	23.2	22.9	22.6	22.3	22.1	21.8	21.6	21.3	21.1	20.9	20.7	20.5	20.3	20.1	1100
1200	32.6	32.0	31.3	30.7	30.2	29.6	29.1	28.6	28.2	27.7	27.3	26.9	26.5	26.1	25.8	25.4	25.1	24.8	24.5	24.2	23.9	23.6	23.4	23.1	22.9	22.6	22.4	22.2	22.0	21.8	1200
1300	35.1	34.4	33.7	33.1	32.5	31.9	31.3	30.8	30.3	29.8	29.4	29.0	28.5	28.1	27.8	27.4	27.0	26.7	26.4	26.1	25.8	25.5	25.2	24.9	24.6	24.4	24.1	23.9	23.7	23.4	1300
1400	37.6	36.8	36.1	35.4	34.8	34.2	33.6	33.0	32.5	32.0	31.5	31.0	30.6	30.2	29.7	29.3	29.0	28.6	28.3	27.9	27.6	27.3	27.0	26.7	26.4	26.1	25.9	25.6	25.4	25.1	1400
1500	40.1	39.3	38.5	37.8	37.1	36.4	35.8	35.2	34.6	34.1	33.6	33.1	32.6	32.2	31.7	31.3	30.9	30.5	30.1	29.8	29.4	29.1	28.8	28.5	28.2	27.9	27.6	27.3	27.1	26.8	1500
Term. 2/	2.732	2.656	2.584	2.516	2.452	2.390	2.332	2.276	2.223	2.173	2.125	2.078	2.034	1.992	1.951	1.912	1.875	1.839	1.804	1.771	1.738	1.707	1.677	1.648	1.621	1.594	1.567	1.542	1.513	1.494	Term. 2/
L. H. 3/	.024911	.024419	.023954	.023513	.023095	.022698	.022320	.021960	.021616	.021289	.020976	.020676	.020389	.020115	.019851	.019598	.019355	.019121	.018896	.018680	.018471	.018270	.018075	.017888	.017707	.017532	.017362	.017198	.017040	.016886	L. H. 3/

1/ Based on a tare weight of 22.1 tons and a ratio of empty car miles to loaded car miles of 0.843. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.13.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.46.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.60.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 11.--TERRITORY NO. 2 - Eastern, excluding New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net loads in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.5	14.6	12.5	11.0	9.8	8.8	8.0	7.3	6.8	6.4	5.9	5.5	5.2	4.9	4.7	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	10
20	18.9	15.8	13.6	11.9	10.6	9.5	8.7	8.0	7.4	6.9	6.4	6.0	5.7	5.4	5.1	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	20
30	20.4	17.0	14.6	12.8	11.4	10.3	9.4	8.6	8.0	7.4	6.9	6.5	6.2	5.8	5.5	5.3	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2	30
40	21.8	18.3	15.7	13.8	12.3	11.1	10.1	9.3	8.6	8.0	7.5	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	3.5	40
50	23.3	19.5	16.7	14.7	13.1	11.8	10.8	9.9	9.2	8.6	8.0	7.5	7.1	6.7	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	3.9	3.8	3.7	50
60	24.7	20.7	17.8	15.6	13.9	12.6	11.5	10.6	9.8	9.1	8.5	8.0	7.6	7.2	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.4	4.2	4.1	4.0	60
70	26.2	21.9	18.9	16.6	14.8	13.3	12.2	11.2	10.4	9.7	9.1	8.5	8.1	7.6	7.3	6.9	6.6	6.3	6.1	5.9	5.6	5.4	5.3	5.1	4.9	4.8	4.6	4.5	4.4	4.3	70
80	27.6	23.1	19.9	17.5	15.6	14.1	12.9	11.9	11.0	10.2	9.6	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.7	4.6	80
90	29.1	24.4	21.0	18.4	16.5	14.9	13.6	12.5	11.6	10.8	10.1	9.5	9.0	8.5	8.1	7.8	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.6	5.4	5.2	5.1	5.0	4.8	90
100	30.5	25.6	22.0	19.4	17.3	15.6	14.3	13.1	12.2	11.4	10.7	10.0	9.5	9.0	8.6	8.2	7.8	7.5	7.2	6.9	6.7	6.5	6.2	6.0	5.9	5.7	5.5	5.4	5.2	5.1	100
120	33.4	28.0	24.1	21.2	19.0	17.2	15.7	14.4	13.4	12.5	11.7	11.0	10.4	9.9	9.4	9.0	8.6	8.3	7.9	7.7	7.4	7.1	6.9	6.7	6.5	6.3	6.1	6.0	5.8	5.7	120
140	36.3	30.5	26.2	23.1	20.6	18.7	17.1	15.7	14.6	13.6	12.8	12.0	11.4	10.8	10.3	9.8	9.4	9.0	8.7	8.4	8.1	7.8	7.6	7.3	7.1	6.9	6.7	6.5	6.4	6.2	140
160	39.2	32.9	28.4	25.0	22.3	20.2	18.5	17.0	15.8	14.8	13.8	13.1	12.4	11.7	11.2	10.7	10.2	9.8	9.4	9.1	8.8	8.5	8.2	8.0	7.7	7.5	7.3	7.1	6.9	6.8	160
180	42.1	35.3	30.5	26.8	24.0	21.7	19.9	18.3	17.0	15.9	14.9	14.1	13.3	12.6	12.0	11.5	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.3	8.1	7.9	7.7	7.5	7.3	180
200	45.0	37.8	32.6	28.7	25.7	23.2	21.3	19.6	18.2	17.0	16.0	15.1	14.3	13.6	12.9	12.3	11.8	11.3	10.9	10.5	10.2	9.8	9.5	9.2	9.0	8.7	8.5	8.3	8.0	7.9	200
220	47.9	40.2	34.7	30.6	27.3	24.8	22.7	20.9	19.4	18.1	17.0	16.1	15.2	14.5	13.8	13.2	12.6	12.1	11.7	11.2	10.9	10.5	10.2	9.9	9.6	9.3	9.1	8.8	8.6	8.4	220
240	50.8	42.7	36.8	32.4	29.0	26.3	24.1	22.2	20.6	19.3	18.1	17.1	16.2	15.4	14.7	14.0	13.4	12.9	12.4	12.0	11.5	11.2	10.8	10.5	10.2	9.9	9.6	9.4	9.2	9.0	240
260	53.7	45.1	38.9	34.3	30.7	27.8	25.4	23.5	21.8	20.4	19.2	18.1	17.1	16.3	15.5	14.8	14.2	13.7	13.1	12.7	12.2	11.8	11.5	11.1	10.8	10.5	10.2	10.0	9.7	9.5	260
280	56.6	47.5	41.0	36.2	32.4	29.3	26.8	24.8	23.0	21.5	20.2	19.1	18.1	17.2	16.4	15.7	15.0	14.4	13.9	13.4	12.9	12.5	12.1	11.8	11.4	11.1	10.8	10.6	10.3	10.0	280
300	59.5	50.0	43.1	38.0	34.0	30.8	28.2	26.1	24.2	22.7	21.3	20.1	19.0	18.1	17.3	16.5	15.8	15.2	14.6	14.1	13.6	13.2	12.8	12.4	12.1	11.7	11.4	11.1	10.9	10.6	300
320	62.4	52.4	45.3	39.9	35.7	32.4	29.6	27.4	25.4	23.8	22.3	21.1	20.0	19.0	18.1	17.3	16.6	16.0	15.4	14.8	14.3	13.9	13.4	13.0	12.7	12.3	12.0	11.7	11.4	11.1	320
340	65.3	54.9	47.4	41.8	37.4	33.9	31.0	28.7	26.6	24.9	23.4	22.1	20.9	19.9	19.0	18.2	17.4	16.7	16.1	15.5	15.0	14.5	14.1	13.7	13.3	12.9	12.6	12.3	12.0	11.7	340
360	68.2	57.3	49.5	43.6	39.1	35.4	32.4	29.9	27.8	26.0	24.5	23.1	21.9	20.8	19.9	19.0	18.2	17.5	16.9	16.3	15.7	15.2	14.7	14.3	13.9	13.5	13.2	12.8	12.5	12.2	360
380	71.1	59.7	51.6	45.5	40.7	36.9	33.8	31.2	29.0	27.2	25.5	24.1	22.9	21.7	20.7	19.8	19.0	18.3	17.6	17.0	16.4	15.9	15.4	14.9	14.5	14.1	13.8	13.4	13.1	12.8	380
400	74.0	62.2	53.7	47.4	42.4	38.5	35.2	32.5	30.2	28.3	26.6	25.1	23.8	22.6	21.6	20.7	19.8	19.1	18.3	17.7	17.1	16.6	16.1	15.6	15.1	14.7	14.4	14.0	13.7	13.3	400
420	76.9	64.6	55.8	49.2	44.1	40.0	36.6	33.8	31.5	29.4	27.7	26.1	24.8	23.6	22.5	21.5	20.6	19.8	19.1	18.4	17.8	17.2	16.7	16.2	15.8	15.3	14.9	14.6	14.2	13.9	420
440	79.8	67.1	57.9	51.1	45.8	41.5	38.0	35.1	32.7	30.5	28.7	27.1	25.7	24.5	23.3	22.3	21.4	20.6	19.8	19.1	18.5	17.9	17.4	16.9	16.4	15.9	15.5	15.1	14.8	14.4	440
460	82.7	69.5	60.0	52.9	47.4	43.0	39.4	36.4	33.9	31.7	29.8	28.1	26.7	25.4	24.2	23.2	22.2	21.4	20.6	19.9	19.2	18.6	18.0	17.5	17.0	16.5	16.1	15.7	15.3	15.0	460
480	85.6	71.9	62.2	54.8	49.1	44.5	40.8	37.7	35.1	32.8	30.8	29.1	27.6	26.3	25.1	24.0	23.0	22.1	21.3	20.6	19.9	19.3	18.7	18.1	17.6	17.2	16.7	16.3	15.9	15.5	480
500	88.5	74.4	64.3	56.7	50.8	46.1	42.2	39.0	36.3	33.9	31.9	30.1	28.6	27.2	26.0	24.8	23.8	22.9	22.1	21.3	20.6	19.9	19.3	18.8	18.2	17.8	17.3	16.9	16.5	16.1	500
600	103.0	86.6	74.8	66.0	59.2	53.7	49.2	45.4	42.3	39.6	37.2	35.2	33.4	31.7	30.3	29.0	27.8	26.8	25.8	24.9	24.1	23.3	22.6	21.9	21.3	20.8	20.2	19.7	19.3	18.8	600
700	117.5	98.8	85.4	75.3	67.5	61.3	56.2	51.9	48.3	45.2	42.5	40.2	38.1	36.3	34.6	33.2	31.8	30.6	29.5	28.5	27.5	26.7	25.9	25.1	24.4	23.8	23.2	22.6	22.1	21.6	700
800	132.0	111.0	95.9	84.7	75.9	68.9	63.2	58.4	54.3	50.9	47.8	45.2	42.9	40.8	39.0	37.3	35.8	34.5	33.2	32.1	31.0	30.0	29.1	28.3	27.5	26.8	26.1	25.5	24.9	24.3	800
900	146.5	123.2	106.5	94.0	84.3	76.5	70.1	64.8	60.3	56.5	53.2	50.2	47.7	45.4	43.3	41.5	39.8	38.3	36.9	35.7	34.5	33.4	32.4	31.5	30.6	29.8	29.1	28.4	27.7	27.1	900
1000	161.0	135.4	117.1	103.3	92.7	84.1	77.1	71.3	66.4	62.1	58.5	55.3	52.4	50.0	47.7	45.7	43.8	42.2	40.6	39.2	38.0	36.8	35.7	34.7	33.7	32.8	32.0	31.2	30.5	29.8	1000
1100	175.5	147.6	127.6	112.7	101.0	91.7	84.1	77.8	72.4	67.8	63.8	60.3	57.2	54.5	52.0	49.8	47.8	46.0	44.4	42.8	41.4	40.1	39.0	37.8	36.8	35.9	35.0	34.1	33.3	32.6	1100
1200	190.0	159.8	138.2	122.0	109.4	99.3	91.1	84.2	78.4	73.4	69.1	65.3	62.0	59.0	56.4	54.0	51.8	49.9	48.1	46.4	44.9	43.5	42.2	41.0	39.9	38.9	37.9	37.0	36.1	35.3	1200
1300	204.5	172.0	148.8	131.3	117.8	106.9	98.1	90.7	84.4	79.1	74.4	70.3	66.8	63.6	60.7	58.1	55.8	53.7	51.8	50.0	48.4	46.9	45.5	44.2	43.0	41.9	40.8	39.9	38.9	38.1	1300
1400	219.0	184.2	159.3	140.7	126.1	114.5	105.0	97.1	90.4	84.7	79.7	75.4	71.5	68.1	65.1	62.3	59.8	57.6	55.5	53.6	51.9	50.3	48.8	47.4	46.1	44.9	43.8	42.7	41.7	40.8	1400
1500	233.5	196.4	169.9	150.0	134.5	122.2	112.0	103.6	96.5	90.3	85.0	80.4	76.3	72.7	69.4	66.5	63.8	61.4	59.2	57.2	55.3	53.6	52.0	50.6	49.2	47.9	46.7	45.6	44.5	43.6	1500
Term. 2/	16.046	13.372	11.461	10.029	8.914	8.023	7.294	6.686	6.172	5.731	5.349	5.014	4.719	4.457	4.223	4.012	3.820	3.647	3.488	3.343	3.209	3.086	2.971	2.865	2.767	2.674	2.588	2.507	2.431	2.360	Term. 2/
L. H. 3/	.144970	.122008	.105607	.093306	.083739	.076085	.069823	.064604	.060188	.056404	.053123	.050253	.047721	.045469	.043455	.041643	.040002	.038511	.037150	.035902	.034754	.033694	.032713	.031802	.030953	.030162	.029421	.028727	.028074	.027460	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.982. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.13.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.46.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.60.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 11 (Concluded).--TERRITORY NO. 2 - Eastern, excluding New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.8	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20	2.8	2.8	2.7	2.6	2.6	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.5	2.5	2.5	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.7	2.7	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.7	3.6	3.6	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100	5.0	4.9	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
120	5.5	5.4	5.3	5.2	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
140	6.1	5.9	5.8	5.7	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
160	6.6	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
180	7.1	7.0	6.8	6.7	6.5	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
200	7.7	7.5	7.3	7.2	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
220	8.2	8.0	7.8	7.7	7.5	7.4	7.2	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
240	8.7	8.5	8.4	8.2	8.0	7.9	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.8	6.7	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
260	9.3	9.1	8.9	8.7	8.5	8.4	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
280	9.8	9.6	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.8	7.7	7.6	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
300	10.4	10.1	9.9	9.7	9.5	9.3	9.2	9.0	8.8	8.7	8.5	8.4	8.3	8.1	8.0	7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
320	10.9	10.7	10.4	10.2	10.0	9.8	9.6	9.5	9.3	9.1	9.0	8.8	8.7	8.6	8.4	8.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
340	11.4	11.2	10.9	10.7	10.5	10.3	10.1	9.9	9.8	9.6	9.4	9.3	9.1	9.0	8.9	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
360	12.0	11.7	11.5	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.7	9.6	9.4	9.3	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
380	12.5	12.2	12.0	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
400	13.0	12.8	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
420	13.6	13.3	13.0	12.7	12.5	12.3	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.7	10.6	10.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
440	14.1	13.8	13.5	13.3	13.0	12.8	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.2	11.0	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
460	14.7	14.3	14.0	13.8	13.5	13.2	13.0	12.8	12.5	12.3	12.1	11.9	11.8	11.6	11.4	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
480	15.2	14.9	14.6	14.3	14.0	13.7	13.5	13.2	13.0	12.8	12.6	12.4	12.2	12.0	11.8	11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
500	15.7	15.4	15.1	14.8	14.5	14.2	14.0	13.7	13.5	13.3	13.0	12.8	12.6	12.4	12.3	12.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
600	18.4	18.0	17.7	17.3	17.0	16.7	16.4	16.1	15.8	15.5	15.3	15.0	14.8	14.6	14.4	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
700	21.1	20.7	20.2	19.8	19.5	19.1	18.8	18.4	18.1	17.8	17.5	17.3	17.0	16.8	16.5	16.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
800	23.8	23.3	22.8	22.4	21.9	21.5	21.2	20.8	20.4	20.1	19.8	19.5	19.2	18.9	18.6	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
900	26.5	25.9	25.4	24.9	24.4	24.0	23.6	23.2	22.8	22.4	22.0	21.7	21.4	21.1	20.8	20.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
1000	29.2	28.6	28.0	27.4	26.9	26.4	26.0	25.5	25.1	24.7	24.3	23.9	23.6	23.2	22.9	22.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
1100	31.9	31.2	30.6	30.0	29.4	28.9	28.4	27.9	27.4	27.0	26.5	26.1	25.7	25.4	25.0	24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
1200	34.5	33.8	33.1	32.5	31.9	31.3	30.8	30.2	29.7	29.3	28.8	28.4	27.9	27.5	27.1	26.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1300	37.2	36.5	35.7	35.0	34.4	33.8	33.2	32.6	32.1	31.5	31.0	30.6	30.1	29.7	29.3	28.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
1400	39.9	39.1	38.3	37.6	36.9	36.2	35.6	35.0	34.4	33.8	33.3	32.8	32.3	31.8	31.4	31.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1500	42.6	41.7	40.9	40.1	39.4	38.6	38.0	37.3	36.7	36.1	35.5	35.0	34.5	34.0	33.5	33.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
Term. 2/	2.292	2.229	2.168	2.111	2.057	2.006	1.957	1.910	1.866	1.823	1.783	1.744	1.707	1.671	1.637	1.605	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.026881	.026335	.025818	.025328	.024863	.024421	.024001	.023601	.023220	.022856	.022508	.022175	.021856	.021551	.021258	.020977	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.982. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.13.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.46.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.60.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 2 - Eastern, excl. N. E. & No. Ill.

STOCK CARS

TABLE 12.—TERRITORY NO. 2 - EASTERN, excluding New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.5	17.1	14.7	12.8	11.4	10.3	9.4	8.6	7.9	7.4	6.9	6.5	6.1	5.7	5.5	5.2	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.7	3.6	3.5	-	-	-	-	10
20	21.9	18.3	15.7	13.7	12.2	11.0	10.0	9.2	8.5	7.9	7.4	6.9	6.5	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	-	-	-	-	20
30	23.3	19.4	16.7	14.6	13.0	11.7	10.7	9.8	9.1	8.5	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.2	5.0	4.8	4.7	4.5	4.3	4.2	4.1	-	-	-	-	30
40	24.7	20.6	17.7	15.5	13.8	12.5	11.4	10.4	9.7	9.0	8.4	7.9	7.5	7.1	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.4	-	-	-	-	40
50	26.1	21.8	18.7	16.4	14.6	13.2	12.0	11.1	10.2	9.5	8.9	8.4	7.9	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.6	-	-	-	-	50
60	27.4	22.9	19.7	17.3	15.4	13.9	12.7	11.7	10.8	10.1	9.4	8.9	8.4	7.9	7.5	7.2	6.9	6.6	6.3	6.1	5.8	5.6	5.4	5.3	5.1	4.9	-	-	-	-	60
70	28.8	24.1	20.7	18.2	16.2	14.7	13.4	12.3	11.4	10.6	9.9	9.4	8.8	8.4	8.0	7.6	7.2	6.9	6.7	6.4	6.2	6.0	5.7	5.6	5.4	5.2	-	-	-	-	70
80	30.2	25.3	21.7	19.1	17.0	15.4	14.0	12.9	12.0	11.2	10.5	9.8	9.3	8.8	8.4	8.0	7.6	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.5	-	-	-	-	80
90	31.6	26.4	22.8	20.0	17.8	16.1	14.7	13.5	12.6	11.7	11.0	10.3	9.8	9.2	8.8	8.4	8.0	7.7	7.4	7.1	6.8	6.6	6.4	6.2	6.0	5.8	-	-	-	-	90
100	33.0	27.6	23.8	20.9	18.6	16.9	15.4	14.2	13.1	12.2	11.5	10.8	10.2	9.7	9.2	8.8	8.4	8.1	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.1	-	-	-	-	100
120	35.8	29.9	25.8	22.7	20.3	18.3	16.7	15.4	14.3	13.3	12.5	11.8	11.1	10.6	10.0	9.6	9.2	8.8	8.5	8.1	7.8	7.6	7.3	7.1	6.9	6.7	-	-	-	-	120
140	38.5	32.3	27.8	24.5	21.9	19.8	18.1	16.6	15.4	14.4	13.5	12.7	12.0	11.4	10.9	10.4	9.9	9.5	9.2	8.8	8.5	8.2	8.0	7.7	7.5	7.3	-	-	-	-	140
160	41.3	34.6	29.8	26.3	23.5	21.2	19.4	17.9	16.6	15.5	14.5	13.7	13.0	12.3	11.7	11.2	10.7	10.3	9.9	9.5	9.2	8.9	8.6	8.3	8.1	7.8	-	-	-	-	160
180	44.1	37.0	31.9	28.0	25.1	22.7	20.7	19.1	17.8	16.6	15.6	14.7	13.9	13.2	12.6	12.0	11.5	11.0	10.6	10.2	9.9	9.5	9.2	8.9	8.7	8.4	-	-	-	-	180
200	46.9	39.3	33.9	29.8	26.7	24.1	22.1	20.4	18.9	17.7	16.6	15.6	14.8	14.1	13.4	12.8	12.3	11.8	11.3	10.9	10.5	10.2	9.9	9.6	9.3	9.0	-	-	-	-	200
220	49.6	41.6	35.9	31.6	28.3	25.6	23.4	21.6	20.1	18.7	17.6	16.6	15.7	14.9	14.2	13.6	13.0	12.5	12.0	11.6	11.2	10.8	10.5	10.2	9.9	9.6	-	-	-	-	220
240	52.4	44.0	37.9	33.4	29.9	27.1	24.8	22.8	21.2	19.8	18.6	17.6	16.6	15.8	15.1	14.4	13.8	13.2	12.7	12.3	11.9	11.5	11.1	10.8	10.5	10.2	-	-	-	-	240
260	55.2	46.3	39.9	35.2	31.5	28.5	26.1	24.1	22.4	20.9	19.6	18.5	17.6	16.7	15.9	15.2	14.6	14.0	13.5	13.0	12.5	12.1	11.7	11.4	11.1	10.8	-	-	-	-	260
280	58.0	48.6	42.0	37.0	33.1	30.0	27.4	25.3	23.5	22.0	20.7	19.5	18.5	17.6	16.7	16.0	15.3	14.7	14.2	13.7	13.2	12.8	12.4	12.0	11.7	11.3	-	-	-	-	280
300	60.7	51.0	44.0	38.8	34.7	31.4	28.8	26.6	24.7	23.1	21.7	20.5	19.4	18.4	17.6	16.8	16.1	15.5	14.9	14.4	13.9	13.4	13.0	12.6	12.3	11.9	-	-	-	-	300
320	63.5	53.3	46.0	40.6	36.3	32.9	30.1	27.8	25.8	24.2	22.7	21.4	20.3	19.3	18.4	17.6	16.9	16.2	15.6	15.1	14.5	14.1	13.6	13.2	12.9	12.5	-	-	-	-	320
340	66.3	55.6	48.0	42.3	37.9	34.4	31.5	29.0	27.0	25.2	23.7	22.4	21.2	20.2	19.2	18.4	17.6	17.0	16.3	15.7	15.2	14.7	14.3	13.8	13.5	13.1	-	-	-	-	340
360	69.0	58.0	50.1	44.1	39.5	35.8	32.8	30.3	28.2	26.3	24.7	23.4	22.1	21.1	20.1	19.2	18.4	17.7	17.0	16.4	15.9	15.4	14.9	14.5	14.0	13.7	-	-	-	-	360
380	71.8	60.3	52.1	45.9	41.1	37.3	34.1	31.5	29.3	27.4	25.8	24.3	23.1	21.9	20.9	20.0	19.2	18.4	17.8	17.1	16.6	16.0	15.5	15.1	14.6	14.2	-	-	-	-	380
400	74.6	62.6	54.1	47.7	42.7	38.7	35.5	32.8	30.5	28.5	26.8	25.3	24.0	22.8	21.8	20.8	20.0	19.2	18.5	17.8	17.2	16.7	16.2	15.7	15.2	14.8	-	-	-	-	400
420	77.4	65.0	56.1	49.5	44.3	40.2	36.8	34.0	31.6	29.6	27.8	26.3	24.9	23.7	22.6	21.6	20.7	19.9	19.2	18.5	17.9	17.3	16.8	16.3	15.8	15.4	-	-	-	-	420
440	80.1	67.3	58.1	51.3	45.9	41.7	38.2	35.2	32.8	30.7	28.8	27.2	25.8	24.5	23.4	22.4	21.5	20.7	19.9	19.2	18.6	18.0	17.4	16.9	16.4	16.0	-	-	-	-	440
460	82.9	69.6	60.2	53.1	47.5	43.1	39.5	36.5	33.9	31.7	29.8	28.2	26.7	25.4	24.3	23.2	22.3	21.4	20.6	19.9	19.2	18.6	18.1	17.5	17.0	16.6	-	-	-	-	460
480	85.7	72.0	62.2	54.9	49.1	44.6	40.8	37.7	35.1	32.8	30.9	29.2	27.6	26.3	25.1	24.0	23.0	22.1	21.3	20.6	19.9	19.3	18.7	18.1	17.6	17.2	-	-	-	-	480
500	88.5	74.3	64.2	56.6	50.7	46.0	42.2	39.0	36.2	33.9	31.9	30.1	28.6	27.2	25.9	24.8	23.8	22.9	22.0	21.3	20.6	19.9	19.3	18.8	18.2	17.7	-	-	-	-	500
600	102.3	86.0	74.3	65.6	58.8	53.3	48.9	45.2	42.0	39.3	37.0	34.9	33.1	31.5	30.1	28.8	27.7	26.6	25.6	24.7	23.9	23.2	22.5	21.8	21.2	20.7	-	-	-	-	600
700	116.2	97.7	84.4	74.5	66.8	60.6	55.6	51.4	47.8	44.7	42.1	39.8	37.7	35.9	34.3	32.8	31.5	30.3	29.2	28.2	27.3	26.4	25.6	24.9	24.2	23.6	-	-	-	-	700
800	130.1	109.3	94.6	83.5	74.8	67.9	62.3	57.6	53.6	50.2	47.2	44.6	42.3	40.3	38.5	36.8	35.4	34.0	32.8	31.7	30.6	29.7	28.8	28.0	27.2	26.5	-	-	-	-	800
900	143.9	121.0	104.7	92.4	82.8	75.2	69.0	63.8	59.3	55.6	52.3	49.4	46.9	44.7	42.7	40.8	39.2	37.7	36.4	35.1	34.0	32.9	31.9	31.0	30.2	29.4	-	-	-	-	900
1000	157.8	132.7	114.8	101.3	90.9	82.5	75.7	70.0	65.1	61.0	57.4	54.3	51.5	49.0	46.8	44.9	43.1	41.4	39.9	38.6	37.3	36.2	35.1	34.1	33.2	32.3	-	-	-	-	1000
1100	171.7	144.4	124.9	110.3	98.9	89.8	82.4	76.1	70.9	66.4	62.5	59.1	56.1	53.4	51.0	48.9	46.9	45.1	43.5	42.0	40.7	39.4	38.2	37.2	36.2	35.2	-	-	-	-	1100
1200	185.5	156.1	135.0	119.2	106.9	97.1	89.0	82.3	76.7	71.8	67.6	63.9	60.7	57.8	55.2	52.9	50.8	48.8	47.1	45.5	44.0	42.7	41.4	40.2	39.1	38.1	-	-	-	-	1200
1300	199.4	167.7	145.1	128.1	114.9	104.4	95.7	88.5	82.5	77.2	72.7	68.8	65.3	62.2	59.4	56.9	54.6	52.6	50.7	49.0	47.4	45.9	44.6	43.3	42.1	41.0	-	-	-	-	1300
1400	213.3	179.4	155.2	137.1	123.0	111.7	102.4	94.7	88.2	82.6	77.8	73.6	69.8	66.5	63.6	60.9	58.5	56.3	54.3	52.4	50.7	49.2	47.7	46.4	45.1	43.9	-	-	-	-	1400
1500	227.1	191.1	165.3	146.0	131.0	119.0	109.1	100.9	94.0	88.1	82.9	78.4	74.4	70.9	67.7	64.9	62.3	60.0	57.8	55.9	54.1	52.4	50.9	49.4	48.1	46.9	-	-	-	-	1500
Term. 2/	19.122	15.935	13.659	11.951	10.623	9.561	8.692	7.968	7.355	6.829	6.374	5.976	5.624	5.312	5.032	4.781	4.553	4.346	4.157	3.984	3.824	3.677	3.541	3.415	3.297	3.187	-	-	-	-	Term. 2/
L. H. 3/	.138680	.116767	.101114	.089375	.080244	.072940	.066964	.061983	.057769	.054157	.051027	.048288	.045871	.043722	.041800	.040070	.038505	.037082	.035783	.034592	.033496	.032485	.031548	.030679	.029869	.029113	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 20.9 tons and a ratio of empty car miles to loaded car miles of 1.006. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.13.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.46.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.60.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 13.—TERRITORY NO. 2 - EASTERN, excluding New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.7	14.7	12.6	11.1	9.8	8.9	8.1	7.4	6.8	6.4	5.9	5.6	5.2	5.0	4.7	4.5	4.3	4.1	3.9	3.7	3.6	3.5	3.3	3.2	3.1	3.0	-	-	-	-	10
20	19.3	16.1	13.8	12.1	10.8	9.7	8.8	8	7.5	7.0	6.5	6.1	5.8	5.5	5.2	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.4	3.3	-	-	-	-	20
30	20.9	17.4	15.0	13.1	11.7	10.5			8.2	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.7	-	-	-	-	30
40	22.5	18.8	16.1	14.2	12.6	11.4		9.5	8.8	8.2	7.7	7.2	6.8	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.6	4.4	4.2	4.1	4.0	-	-	-	-	40
50	24.1	20.1	17.3	15.2	13.5	12.2	.1	10.2	9.5	8.8	8.3	7.8	7.3	6.9	6.6	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.8	4.6	4.4	4.3	-	-	-	-	50
60	25.7	21.5	18.5	16.2	14.5	13.1	11.9	11.0	10.1	9.5	8.8	8.3	7.9	7.4	7.1	6.7	6.4	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.6	-	-	-	-	60
70	27.3	22.8	19.6	17.2	15.4	13.9	12.7	11.7	10.8	10.1	9.4	8.9	8.4	7.9	7.6	7.2	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	5.0	-	-	-	-	70
80	28.9	24.2	20.8	18.3	16.3	14.7	13.4	12.4	11.5	10.7	10.0	9.4	8.9	8.4	8.0	7.7	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.5	5.3	-	-	-	-	80
90	30.5	25.5	22.0	19.3	17.2	15.6	14.2	13.1	12.1	11.3	10.6	10.0	9.4	8.9	8.5	8.1	7.8	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.8	5.6	-	-	-	-	90
100	32.1	26.9	23.1	20.3	18.2	16.4	15.0	13.8	12.8	11.9	11.2	10.5	10.0	9.4	9.0	8.6	8.2	7.9	7.5	7.3	7.0	6.8	6.5	6.3	6.1	6.0	-	-	-	-	100
120	35.3	29.6	25.5	22.4	20.0	18.1	16.5	15.2	14.1	13.2	12.3	11.6	11.0	10.4	9.9	9.5	9.1	8.7	8.4	8.0	7.8	7.5	7.2	7.0	6.8	6.6	-	-	-	-	120
140	38.5	32.3	27.8	24.5	21.9	19.8	18.1	16.6	15.4	14.4	13.5	12.7	12.0	11.4	10.9	10.4	9.9	9.5	9.2	8.8	8.5	8.2	8.0	7.7	7.5	7.3	-	-	-	-	140
160	41.7	35.0	30.1	26.5	23.7	21.4	19.6	18.1	16.8	15.6	14.7	13.8	13.1	12.4	11.8	11.3	10.8	10.4	10.0	9.6	9.3	9.0	8.7	8.4	8.2	7.9	-	-	-	-	160
180	45.0	37.7	32.5	28.6	25.6	23.1	21.1	19.5	18.1	16.9	15.9	14.9	14.1	13.4	12.8	12.2	11.7	11.2	10.8	10.4	10.0	9.7	9.4	9.1	8.8	8.6	-	-	-	-	180
200	48.2	40.4	34.8	30.6	27.4	24.8	22.7	20.9	19.4	18.1	17.0	16.0	15.2	14.4	13.7	13.1	12.6	12.1	11.6	11.2	10.8	10.4	10.1	9.8	9.5	9.2	-	-	-	-	200
220	51.4	43.1	37.2	32.7	29.2	26.5	24.2	22.3	20.7	19.4	18.2	17.1	16.2	15.4	14.7	14.0	13.4	12.9	12.4	12.0	11.5	11.2	10.8	10.5	10.2	9.9	-	-	-	-	220
240	54.6	45.8	39.5	34.8	31.1	28.2	25.8	23.8	22.1	20.6	19.4	18.2	17.3	16.4	15.6	14.9	14.3	13.7	13.2	12.7	12.3	11.9	11.5	11.2	10.8	10.5	-	-	-	-	240
260	57.8	48.5	41.8	36.8	32.9	29.8	27.3	25.2	23.4	21.8	20.5	19.4	18.3	17.4	16.6	15.9	15.2	14.6	14.0	13.5	13.1	12.6	12.2	11.9	11.5	11.2	-	-	-	-	260
280	61.0	51.2	44.2	38.9	34.8	31.5	28.8	26.6	24.7	23.1	21.7	20.5	19.4	18.4	17.5	16.8	16.1	15.4	14.8	14.3	13.8	13.4	12.9	12.6	12.2	11.8	-	-	-	-	280
300	64.2	53.9	46.5	41.0	36.6	33.2	30.4	28.0	26.0	24.3	22.9	21.6	20.4	19.4	18.5	17.7	16.9	16.3	15.7	15.1	14.6	14.1	13.7	13.2	12.9	12.5	-	-	-	-	300
320	67.4	56.6	48.8	43.0	38.5	34.9	31.9	29.4	27.4	25.6	24.0	22.7	21.5	20.4	19.4	18.6	17.8	17.1	16.5	15.9	15.3	14.8	14.4	13.9	13.5	13.2	-	-	-	-	320
340	70.7	59.3	51.2	45.1	40.3	36.6	33.5	30.9	28.7	26.8	25.2	23.8	22.5	21.4	20.4	19.5	18.7	18.0	17.3	16.7	16.1	15.6	15.1	14.6	14.2	13.8	-	-	-	-	340
360	73.9	62.0	53.5	47.1	42.2	38.2	35.0	32.3	30.0	28.0	26.4	24.9	23.6	22.4	21.3	20.4	19.6	18.8	18.1	17.4	16.8	16.3	15.8	15.3	14.9	14.5	-	-	-	-	360
380	77.1	64.7	55.8	49.2	44.0	39.9	36.5	33.7	31.3	29.3	27.5	26.0	24.6	23.4	22.3	21.3	20.4	19.6	18.9	18.2	17.6	17.0	16.5	16.0	15.6	15.1	-	-	-	-	380
400	80.3	67.4	58.2	51.3	45.9	41.6	38.1	35.1	32.7	30.5	28.7	27.1	25.6	24.4	23.3	22.2	21.3	20.5	19.7	19.0	18.4	17.8	17.2	16.7	16.2	15.8	-	-	-	-	400
420	83.5	70.1	60.5	53.3	47.7	43.3	39.6	36.6	34.0	31.8	29.9	28.2	26.7	25.4	24.2	23.1	22.2	21.3	20.5	19.8	19.1	18.5	17.9	17.4	16.9	16.4	-	-	-	-	420
440	86.7	72.8	62.8	55.4	49.5	44.9	41.1	38.0	35.3	33.0	31.0	29.3	27.7	26.4	25.2	24.1	23.1	22.2	21.3	20.6	19.9	19.2	18.6	18.1	17.6	17.1	-	-	-	-	440
460	89.9	75.5	65.2	57.4	51.4	46.6	42.7	39.4	36.6	34.2	32.2	30.4	28.8	27.4	26.1	25.0	23.9	23.0	22.1	21.4	20.6	20.0	19.4	18.8	18.2	17.7	-	-	-	-	460
480	93.1	78.2	67.5	59.5	53.3	48.3	44.2	40.8	38.0	35.5	33.4	31.5	29.8	28.4	27.1	25.9	24.8	23.8	23.0	22.1	21.4	20.7	20.1	19.5	18.9	18.4	-	-	-	-	480
500	96.4	80.9	69.9	61.6	55.1	50.0	45.8	42.2	39.3	36.7	34.5	32.6	30.9	29.4	28.0	26.8	25.7	24.7	23.8	22.9	22.2	21.4	20.8	20.2	19.6	19.1	-	-	-	-	500
600	112.4	94.4	81.5	71.9	64.4	58.4	53.5	49.4	45.9	42.9	40.4	38.1	36.1	34.3	32.8	31.3	30.1	28.9	27.8	26.8	25.9	25.1	24.3	23.6	23.0	22.3	-	-	-	-	600
700	128.5	107.9	93.2	82.2	73.6	66.8	61.1	56.5	52.5	49.1	46.2	43.6	41.3	39.3	37.5	35.9	34.4	33.1	31.9	30.8	29.7	28.8	27.9	27.1	26.3	25.6	-	-	-	-	700
800	144.5	121.4	104.9	92.5	82.9	75.2	68.8	63.6	59.1	55.3	52.0	49.1	46.6	44.3	42.3	40.5	38.8	37.3	35.9	34.7	33.5	32.4	31.5	30.5	29.7	28.9	-	-	-	-	800
900	160.6	134.9	116.6	102.8	92.1	83.5	76.5	70.7	65.8	61.5	57.9	54.6	51.8	49.3	47.0	45.0	43.2	41.5	40.0	38.6	37.3	36.1	35.0	34.0	33.1	32.2	-	-	-	-	900
1000	176.7	148.4	128.2	113.1	101.3	91.9	84.2	77.8	72.4	67.7	63.7	60.2	57.0	54.3	51.8	49.6	47.5	45.7	44.0	42.5	41.1	39.8	38.6	37.5	36.4	35.4	-	-	-	-	1000
1100	192.7	161.9	139.9	123.4	110.6	100.3	91.9	84.9	79.0	73.9	69.5	65.7	62.3	59.3	56.6	54.1	51.9	49.9	48.1	46.4	44.9	43.5	42.1	40.9	39.8	38.7	-	-	-	-	1100
1200	208.8	175.4	151.6	133.7	119.8	108.7	99.6	92.0	85.6	80.1	75.4	71.2	67.5	64.2	61.3	58.7	56.3	54.1	52.2	50.3	48.7	47.1	45.7	44.4	43.1	42.0	-	-	-	-	1200
1300	224.9	188.9	163.3	144.0	129.1	117.1	107.3	99.1	92.2	86.3	81.2	76.7	72.7	69.2	66.1	63.2	60.7	58.3	56.2	54.3	52.5	50.8	49.3	47.8	46.5	45.3	-	-	-	-	1300
1400	240.9	202.4	175.0	154.4	138.3	125.5	115.0	106.3	98.9	92.5	87.0	82.2	78.0	74.2	70.8	67.8	65.0	62.5	60.3	58.2	56.2	54.5	52.8	51.3	49.9	48.6	-	-	-	-	1400
1500	257.0	215.9	186.6	164.7	147.6	133.9	122.7	113.4	105.5	98.7	92.9	87.7	83.2	79.2	75.6	72.3	69.4	66.7	64.3	62.1	60.0	58.1	56.4	54.8	53.2	51.8	-	-	-	-	1500
Term. 2/	16.046	13.372	11.461	10.029	8.914	8.023	7.294	6.686	6.172	5.731	5.349	5.014	4.719	4.457	4.223	4.012	3.820	3.647	3.488	3.343	3.209	3.086	2.971	2.865	2.767	2.674	-	-	-	-	Term. 2/
L. H. 3/	.160620	.135050	.116786	.103088	.092433	.083910	.076936	.071125	.066208	.061993	.058340	.055144	.052324	.049817	.047574	.045555	.043729	.042068	.040552	.039163	.037884	.036704	.035611	.034596	.033652	.032770	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.869. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.13.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.46.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.60.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

23.

Territory No. 2 - Eastern, excl. N. E. & No. Ill.

LESS-CARLOAD

TABLE 14.—TERRITORY NO. 2 - EASTERN, excluding New England and Northern Illinois

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	86.4	66.3	56.2	50.2	46.2	43.3	41.1	39.4	38.1	37.0	36.1	35.3	34.7	34.1	33.6	33.1	32.7	32.4	32.1	31.8	31.5	31.3	31.1	30.9	30.7	30.5	30.3	30.2	30.1	10
20	92.0	70.1	59.1	52.5	48.1	45.0	42.7	40.8	39.4	38.2	37.2	36.3	35.6	35.0	34.4	34.0	33.5	33.1	32.8	32.5	32.2	31.9	31.7	31.5	31.3	31.1	30.9	30.8	30.6	20
30	97.6	73.8	62.0	54.9	50.1	46.7	44.2	42.2	40.6	39.3	38.3	37.3	36.6	35.9	35.3	34.8	34.3	33.9	33.5	33.2	32.9	32.6	32.3	32.1	31.9	31.7	31.5	31.3	31.1	30
40	103.1	77.6	64.9	57.2	52.1	48.5	45.7	43.6	41.9	40.5	39.3	38.4	37.5	36.8	36.2	35.6	35.1	34.6	34.2	33.9	33.5	33.2	33.0	32.7	32.5	32.3	32.1	31.9	31.7	40
50	108.7	81.4	67.7	59.5	54.1	50.2	47.3	45.0	43.2	41.7	40.4	39.4	38.5	37.7	37.0	36.4	35.9	35.4	35.0	34.6	34.2	33.9	33.6	33.3	33.1	32.8	32.6	32.4	32.2	50
60	114.3	85.2	70.6	61.9	56.1	51.9	48.8	46.4	44.4	42.8	41.5	40.4	39.4	38.6	37.9	37.2	36.7	36.2	35.7	35.3	34.9	34.6	34.2	33.9	33.7	33.4	33.2	33.0	32.8	60
70	119.9	89.0	73.5	64.2	58.1	53.6	50.3	47.7	45.7	44.0	42.6	41.4	40.4	39.5	38.7	38.1	37.4	36.9	36.4	36.0	35.6	35.2	34.9	34.6	34.3	34.0	33.8	33.5	33.3	70
80	125.4	92.7	76.4	66.6	60.0	55.4	51.9	49.1	47.0	45.2	43.7	42.4	41.3	40.4	39.6	38.9	38.2	37.7	37.1	36.7	36.3	35.9	35.5	35.2	34.9	34.6	34.3	34.1	33.9	80
90	131.0	96.5	79.3	68.9	62.0	57.1	53.4	50.5	48.2	46.3	44.8	43.4	42.3	41.3	40.5	39.7	39.0	38.4	37.9	37.4	36.9	36.5	36.1	35.8	35.5	35.2	34.9	34.7	34.4	90
100	136.6	100.3	82.1	71.3	64.0	58.8	54.9	51.9	49.5	47.5	45.9	44.5	43.3	42.2	41.3	40.5	39.8	39.2	38.6	38.1	37.6	37.2	36.8	36.4	36.1	35.8	35.5	35.2	35.0	100
120	147.7	107.8	87.9	75.9	68.0	62.3	58.0	54.7	52.0	49.8	48.0	46.5	45.2	44.0	43.0	42.2	41.4	40.7	40.0	39.5	39.0	38.5	38.1	37.7	37.3	36.9	36.6	36.3	36.1	120
140	158.9	115.4	93.7	80.6	71.9	65.7	61.1	57.4	54.5	52.2	50.2	48.5	47.1	45.8	44.8	43.8	42.9	42.2	41.5	40.9	40.3	39.8	39.3	38.9	38.5	38.1	37.8	37.5	37.1	140
160	170.0	123.0	99.4	85.3	75.9	69.2	64.1	60.2	57.1	54.5	52.4	50.5	49.0	47.7	46.5	45.4	44.5	43.7	42.9	42.3	41.7	41.1	40.6	40.1	39.7	39.3	38.9	38.6	38.2	160
180	181.2	130.5	105.2	90.0	79.9	72.6	67.2	63.0	59.6	56.8	54.5	52.6	50.9	49.5	48.2	47.1	46.1	45.2	44.4	43.7	43.0	42.4	41.9	41.4	40.9	40.5	40.1	39.7	39.3	180
200	192.3	138.1	111.0	94.7	83.8	76.1	70.3	65.7	62.1	59.2	56.7	54.6	52.8	51.3	49.9	48.7	47.7	46.7	45.9	45.1	44.4	43.7	43.1	42.6	42.3	41.6	41.2	40.8	40.4	200
220	203.5	145.6	116.7	99.4	87.8	79.5	73.3	68.5	64.7	61.5	58.9	56.6	54.7	53.1	51.6	50.4	49.2	48.2	47.3	46.5	45.7	45.0	44.4	43.8	43.3	42.8	42.3	41.9	41.5	220
240	214.6	153.2	122.5	104.0	91.8	83.0	76.4	71.3	67.2	63.8	61.0	58.7	56.6	54.9	53.4	52.0	50.8	49.7	48.8	47.9	47.1	46.3	45.7	45.1	44.5	44.0	43.5	43.0	42.6	240
260	225.8	160.7	128.2	108.7	95.7	86.4	79.5	74.0	69.7	66.2	63.2	60.7	58.6	56.7	55.1	53.6	52.4	51.2	50.2	49.3	48.4	47.7	47.0	46.3	45.7	45.1	44.6	44.2	43.7	260
280	236.9	168.3	134.0	113.4	99.7	89.9	82.5	76.8	72.2	68.5	65.4	62.7	60.5	58.5	56.8	55.3	53.9	52.7	51.7	50.7	49.8	49.0	48.2	47.5	46.9	46.3	45.8	45.3	44.8	280
300	248.1	175.9	139.8	118.1	103.7	93.3	85.6	79.6	74.8	70.8	67.5	64.8	62.4	60.3	58.5	56.9	55.5	54.2	53.1	52.1	51.1	50.3	49.5	48.8	48.1	47.5	46.9	46.4	45.9	300
320	259.2	183.4	145.5	122.8	107.6	96.8	88.7	82.3	77.3	73.2	69.7	66.8	64.3	62.1	60.2	58.6	57.1	55.8	54.6	53.5	52.5	51.6	50.8	50.0	49.3	48.7	48.1	47.5	47.0	320
340	270.4	191.0	151.3	127.5	111.6	100.2	91.7	85.1	79.8	75.5	71.9	68.8	66.2	63.9	62.0	60.2	58.7	57.3	56.0	54.9	53.8	52.9	52.0	51.2	50.5	49.8	49.2	48.6	48.1	340
360	281.5	198.5	157.0	132.1	115.5	103.7	94.8	87.9	82.4	77.8	74.1	70.9	68.1	65.8	63.7	61.8	60.2	58.8	57.5	56.3	55.2	54.2	53.3	52.5	51.7	51.0	50.3	49.7	49.2	360
380	292.7	206.1	162.8	136.8	119.5	107.1	97.9	90.6	84.9	80.2	76.2	72.9	70.0	67.6	65.4	63.5	61.8	60.3	58.9	57.7	56.5	55.5	54.6	53.7	52.8	52.2	51.5	50.9	50.2	380
400	303.8	213.6	168.6	141.5	123.5	110.6	101.9	93.4	87.4	82.5	78.4	74.9	71.9	69.4	67.1	65.1	63.4	61.8	60.4	59.1	57.9	56.8	55.9	54.9	54.1	53.3	52.6	52.0	51.3	400
420	315.0	221.2	174.3	146.2	127.4	114.0	104.0	96.2	89.9	84.8	80.6	77.0	73.9	71.2	68.8	66.8	64.9	63.3	61.8	60.5	59.3	58.1	57.1	56.2	55.3	54.5	53.8	53.1	52.4	420
440	326.1	228.8	180.1	150.9	131.4	117.5	107.1	99.0	92.5	87.2	82.7	79.0	75.8	73.0	70.6	68.4	66.5	64.8	63.3	61.9	60.6	59.5	58.4	57.4	56.5	55.7	54.9	54.2	53.5	440
460	337.3	236.3	185.8	155.6	135.4	121.0	110.1	101.7	95.0	89.5	84.9	81.0	77.7	74.8	72.3	70.1	68.1	66.3	64.7	63.3	62.0	60.8	59.7	58.7	57.7	56.9	56.1	55.3	54.6	460
480	348.4	243.9	191.6	160.2	139.3	124.4	113.2	104.5	97.5	91.8	87.1	83.0	79.6	76.6	74.0	71.7	69.6	67.8	66.2	64.7	63.3	62.1	60.9	59.9	58.9	58.0	57.2	56.4	55.7	480
500	359.6	251.4	197.4	164.9	143.3	127.9	116.3	107.3	100.1	94.2	89.2	85.1	81.5	78.4	75.7	73.3	71.2	69.3	67.6	66.1	64.7	63.4	62.2	61.1	60.1	59.2	58.3	57.6	56.8	500
600	415.3	289.2	226.2	188.3	163.1	145.1	131.6	121.1	112.7	105.8	100.1	95.2	91.1	87.5	84.3	81.5	79.1	76.9	74.9	73.1	71.4	69.9	68.6	67.3	66.1	65.1	64.1	63.1	62.3	600
700	471.0	327.0	255.0	211.8	183.0	162.4	146.9	134.9	125.3	117.5	110.9	105.4	100.6	96.5	92.9	89.7	86.9	84.4	82.1	80.1	78.2	76.5	74.9	73.5	72.1	70.9	69.8	68.7	67.7	700
800	526.8	364.8	283.8	235.2	202.8	179.6	162.3	148.8	138.0	129.1	121.8	115.5	110.2	105.6	101.5	98.0	94.8	91.9	89.4	87.1	85.0	83.0	81.3	79.7	78.2	76.8	75.5	74.3	73.2	800
900	582.5	402.6	312.6	258.6	222.6	196.9	177.6	162.6	150.6	140.8	132.6	125.7	119.8	114.6	110.1	106.2	102.6	99.5	96.6	94.1	91.7	89.6	87.6	85.8	84.2	82.6	81.2	79.9	78.6	900
1000	638.3	440.3	341.4	282.0	242.4	214.2	193.0	176.5	163.3	152.5	143.5	135.9	129.3	123.7	118.7	114.4	110.5	107.0	103.9	101.1	98.5	96.1	94.0	92.0	90.2	88.5	86.9	85.5	84.1	1000
1100	694.0	478.1	370.2	305.4	262.3	231.4	208.3	190.3	175.9	164.1	154.3	146.0	138.9	132.7	127.3	122.6	118.3	114.5	111.1	108.1	105.3	102.7	100.4	98.2	96.2	94.4	92.6	91.0	89.6	1100
1200	749.7	515.9	399.0	328.8	282.1	248.7	223.6	204.1	188.5	175.8	165.2	156.2	148.5	141.8	135.9	130.8	126.2	122.1	118.4	115.1	112.0	109.2	106.7	104.4	102.2	100.2	98.4	96.6	95.0	1200
1300	805.5	553.7	427.8	352.3	301.9	265.9	239.0	218.0	201.2	187.4	176.0	166.3	158.0	150.8	144.5	139.0	134.0	129.6	125.7	122.1	118.8	115.8	113.1	110.5	108.2	106.1	104.1	102.2	100.5	1300
1400	861.2	591.5	456.6	375.7	321.7	283.2	254.3	231.8	213.8	199.1	186.8	176.5	167.6	159.9	153.1	147.2	141.9	137.2	132.9	129.1	125.6	122.4	119.4	116.7	114.2	111.9	109.8	107.8	105.9	1400
1500	917.0	629.3	485.4	399.1	341.6	300.5	269.6	245.6	226.5	210.8	197.7	186.8	177.1	168.9	161.7	155.4	149.7	144.7	140.2	136.1	132.3	128.9	125.8	122.9	120.2	117.8	115.5	113.4	111.4	1500
Term. 2/	80.840	62.505	53.340	47.840	44.175	41.555	39.590	38.060	36.840	35.840	35.005	34.300	33.695	33.175	32.715	32.310	31.950	31.630	31.340	31.080	30.840	30.625	30.425	30.240	30.070	29.915	29.770	29.635	29.505	Term. 2/
L. H. 3/	.55742	.37784	.28805	.23417	.19825	.17260	.15336	.13839	.12642	.11662	.10846	.10155	.09563	.09050	.08601	.08205	.07853	.07538	.07255	.06998	.06765	.06552	.06357	.06177	.06011	.05858	.05715	.05583	.05459	L. H. 3/

1/ Based on a tare weight of 23.3 tons and a ratio of empty car miles to loaded car miles of 0.350. The Less-carload cost study provides for several levels of cost. Cost Level II is that in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.21.

For Cost Level III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.30.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 3 - Eastern, excl. N. E. but incl. No. Ill.

BOX CARS

TABLE 15.—TERRITORY NO. 3 - EASTERN, excluding New England but including Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.3	16.9	14.5	12.7	11.3	10.2	9.3	8.5	7.9	7.3	6.8	6.4	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	10
20	21.3	17.8	15.3	13.4	11.9	10.7	9.8	9.0	8.3	7.7	7.2	6.8	6.4	6.0	5.7	5.4	5.2	5.0	4.7	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	3.3	20
30	22.3	18.6	16.0	14.0	12.5	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.4	6.0	5.7	5.5	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.6	30
40	23.3	19.5	16.7	14.7	13.1	11.8	10.7	9.9	9.1	8.5	8.0	7.5	7.1	6.7	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.3	4.1	4.0	3.9	3.8	3.7	40
50	24.3	20.3	17.5	15.3	13.7	12.3	11.2	10.3	9.6	8.9	8.3	7.8	7.4	7.0	6.7	6.3	6.1	5.8	5.6	5.3	5.1	5.0	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9	50
60	25.3	21.1	18.2	16.0	14.2	12.9	11.7	10.8	10.0	9.3	8.7	8.2	7.7	7.3	7.0	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	4.1	60
70	26.3	22.0	18.9	16.6	14.8	13.4	12.2	11.2	10.4	9.7	9.1	8.6	8.1	7.7	7.3	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.7	4.5	4.4	4.3	70
80	27.3	22.8	19.7	17.3	15.4	13.9	12.7	11.7	10.8	10.1	9.5	8.9	8.4	8.0	7.6	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.7	4.6	4.5	80
90	28.3	23.7	20.4	17.9	16.0	14.5	13.2	12.2	11.3	10.5	9.9	9.3	8.8	8.3	7.9	7.6	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	5.1	5.0	4.8	4.7	90
100	29.3	24.5	21.1	18.6	16.6	15.0	13.7	12.6	11.7	10.9	10.2	9.6	9.1	8.6	8.2	7.9	7.5	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.0	4.9	100
120	31.3	26.2	22.6	19.9	17.8	16.1	14.7	13.5	12.6	11.7	11.0	10.4	9.8	9.3	8.9	8.5	8.1	7.8	7.5	7.2	6.9	6.7	6.5	6.3	6.1	5.9	5.8	5.6	5.5	5.3	120
140	33.3	27.9	24.0	21.2	18.9	17.1	15.7	14.4	13.4	12.5	11.8	11.1	10.5	10.0	9.5	9.1	8.7	8.3	8.0	7.7	7.5	7.2	7.0	6.8	6.6	6.4	6.2	6.0	5.9	5.7	140
160	35.2	29.6	25.5	22.5	20.1	18.2	16.6	15.4	14.3	13.3	12.5	11.8	11.2	10.6	10.1	9.7	9.3	8.9	8.6	8.2	8.0	7.7	7.5	7.2	7.0	6.8	6.6	6.5	6.3	6.2	160
180	37.2	31.2	27.0	23.8	21.3	19.3	17.6	16.3	15.1	14.1	13.3	12.5	11.9	11.3	10.7	10.3	9.8	9.5	9.1	8.8	8.5	8.2	7.9	7.7	7.5	7.3	7.1	6.9	6.7	6.6	180
200	39.2	32.9	28.4	25.1	22.4	20.3	18.6	17.2	16.0	14.9	14.0	13.2	12.5	11.9	11.4	10.9	10.4	10.0	9.6	9.3	9.0	8.7	8.4	8.2	7.9	7.7	7.5	7.3	7.2	7.0	200
220	41.2	34.6	29.9	26.3	23.6	21.4	19.6	18.1	16.8	15.7	14.8	14.0	13.2	12.6	12.0	11.5	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.7	8.4	8.2	8.0	7.8	7.6	7.4	220
240	43.2	36.3	31.3	27.6	24.8	22.5	20.6	19.0	17.7	16.5	15.5	14.7	13.9	13.2	12.6	12.1	11.6	11.1	10.7	10.4	10.0	9.7	9.4	9.1	8.9	8.6	8.4	8.2	8.0	7.8	240
260	45.2	38.0	32.8	28.9	25.9	23.5	21.6	19.9	18.5	17.3	16.3	15.4	14.6	13.9	13.3	12.7	12.2	11.7	11.3	10.9	10.5	10.2	9.9	9.6	9.3	9.1	8.8	8.6	8.4	8.2	260
280	47.2	39.7	34.3	30.2	27.1	24.6	22.5	20.8	19.4	18.1	17.1	16.1	15.3	14.6	13.9	13.3	12.8	12.3	11.8	11.4	11.0	10.7	10.4	10.1	9.8	9.5	9.3	9.1	8.8	8.6	280
300	49.2	41.3	35.7	31.5	28.3	25.7	23.5	21.7	20.2	18.9	17.8	16.8	16.0	15.2	14.5	13.9	13.3	12.8	12.4	11.9	11.6	11.2	10.9	10.5	10.3	10.0	9.7	9.5	9.3	9.1	300
320	51.2	43.0	37.2	32.8	29.4	26.7	24.5	22.7	21.1	19.7	18.6	17.6	16.7	15.9	15.1	14.5	13.9	13.4	12.9	12.5	12.1	11.7	11.3	11.0	10.7	10.4	10.2	9.9	9.7	9.5	320
340	53.2	44.7	38.7	34.1	30.6	27.8	25.5	23.6	21.9	20.5	19.3	18.3	17.3	16.5	15.8	15.1	14.5	14.0	13.5	13.0	12.6	12.2	11.8	11.5	11.2	10.9	10.6	10.4	10.1	9.9	340
360	55.1	46.4	40.1	35.4	31.8	28.9	26.5	24.5	22.8	21.3	20.1	19.0	18.0	17.2	16.4	15.7	15.1	14.5	14.0	13.5	13.1	12.7	12.3	12.0	11.6	11.3	11.1	10.8	10.5	10.3	360
380	57.1	48.1	41.6	36.7	32.9	29.9	27.5	25.4	23.6	22.2	20.9	19.7	18.7	17.8	17.0	16.3	15.7	15.1	14.5	14.1	13.6	13.2	12.8	12.4	12.1	11.8	11.5	11.2	11.0	10.7	380
400	59.1	49.7	43.0	38.0	34.1	31.0	28.4	26.3	24.5	23.0	21.6	20.4	19.4	18.5	17.7	16.9	16.3	15.6	15.1	14.6	14.1	13.7	13.3	12.9	12.6	12.2	11.9	11.7	11.4	11.1	400
420	61.1	51.4	44.5	39.3	35.3	32.1	29.4	27.2	25.4	23.8	22.4	21.2	20.1	19.1	18.3	17.5	16.8	16.2	15.6	15.1	14.6	14.2	13.8	13.4	13.0	12.7	12.4	12.1	11.8	11.5	420
440	63.1	53.1	46.0	40.6	36.5	33.1	30.4	28.1	26.2	24.6	23.1	21.9	20.8	19.8	18.9	18.1	17.4	16.8	16.2	15.6	15.1	14.7	14.2	13.9	13.5	13.1	12.8	12.5	12.2	12.0	440
460	65.1	54.8	47.4	41.9	37.6	34.2	31.4	29.0	27.2	25.4	23.9	22.6	21.5	20.5	19.6	18.7	18.0	17.3	16.7	16.2	15.6	15.2	14.7	14.3	13.9	13.6	13.3	12.9	12.7	12.4	460
480	67.1	56.5	48.9	43.2	38.8	35.3	32.4	30.0	27.9	26.2	24.6	23.3	22.2	21.1	20.2	19.3	18.6	17.9	17.3	16.7	16.2	15.7	15.2	14.8	14.4	14.0	13.7	13.4	13.1	12.8	480
500	69.1	58.2	50.4	44.5	40.0	36.3	33.3	30.9	28.8	27.0	25.4	24.0	22.8	21.8	20.8	19.9	19.2	18.5	17.8	17.2	16.7	16.2	15.7	15.3	14.9	14.5	14.1	13.8	13.5	13.2	500
600	79.0	66.6	57.7	51.0	45.8	41.7	38.3	35.4	33.0	31.0	29.2	27.6	26.3	25.0	24.0	23.0	22.1	21.3	20.5	19.9	19.2	18.7	18.1	17.6	17.2	16.7	16.3	16.0	15.6	15.3	600
700	89.0	75.0	65.0	57.5	51.7	47.0	43.2	40.0	37.3	35.0	33.0	31.2	29.7	28.3	27.1	26.0	25.0	24.1	23.3	22.5	21.8	21.2	20.6	20.0	19.5	19.0	18.5	18.1	17.7	17.4	700
800	98.9	83.4	72.3	64.0	57.5	52.3	48.1	44.6	41.6	39.0	36.8	34.8	33.1	31.6	30.2	29.0	27.9	26.9	26.0	25.1	24.4	23.6	23.0	22.4	21.8	21.3	20.8	20.3	19.8	19.4	800
900	108.9	91.8	79.6	70.5	63.3	57.7	53.0	49.1	45.8	43.0	40.6	38.4	36.6	34.9	33.4	32.0	30.8	29.7	28.7	27.8	26.9	26.1	25.4	24.7	24.1	23.5	23.0	22.4	22.0	21.5	900
1000	118.8	100.2	86.9	76.9	69.2	63.0	57.9	53.7	50.1	47.0	44.4	42.0	40.0	38.2	36.5	35.1	33.7	32.5	31.4	30.4	29.5	28.6	27.8	27.1	26.4	25.8	25.2	24.6	24.1	23.6	1000
1100	128.8	108.6	94.2	83.4	75.0	68.3	62.8	58.2	54.4	51.0	48.2	45.6	43.4	41.4	39.7	38.1	36.7	35.3	34.1	33.1	32.0	31.1	30.3	29.5	28.7	28.0	27.4	26.8	26.2	25.6	1100
1200	138.7	117.0	101.5	89.9	80.9	73.6	67.7	62.8	58.6	55.1	52.0	49.2	46.9	44.7	42.8	41.1	39.6	38.2	36.9	35.7	34.6	33.6	32.7	31.8	31.0	30.3	29.6	28.9	28.3	27.7	1200
1300	148.7	125.4	108.8	96.4	86.7	79.0	72.6	67.4	62.9	59.1	55.8	52.8	50.3	48.0	46.0	44.1	42.5	41.0	39.6	38.3	37.2	36.1	35.1	34.2	33.3	32.5	31.8	31.1	30.4	29.8	1300
1400	158.6	133.8	116.2	102.9	92.6	84.3	77.6	71.9	67.2	63.1	59.5	56.4	53.7	51.3	49.1	47.2	45.4	43.8	42.3	41.0	39.7	38.6	37.5	36.5	35.6	34.8	34.0	33.2	32.5	31.9	1400
1500	168.6	142.3	123.5	109.4	98.4	89.6	82.5	76.5	71.4	67.1	63.3	60.0	57.1	54.6	52.3	50.2	48.3	46.6	45.0	43.6	42.3	41.1	40.0	38.9	37.9	37.0	36.2	35.4	34.6	33.9	1500
Term. 2/	19.324	16.103	13.803	12.078	10.736	9.662	8.784	8.052	7.432	6.901	6.441	6.039	5.684	5.368	5.085	4.831	4.601	4.392	4.201	4.026	3.865	3.716	3.579	3.451	3.332	3.221	3.117	3.019	2.928	2.842	Term. 2/
L. H. 3/	.099490	.084100	.073107	.064863	.058450	.053320	.049123	.045625	.042665	.040129	.037930	.036006	.034309	.032800	.031450	.030235	.029136	.028136	.027224	.026388	.025618	.024908	.024250	.023639	.023071	.022540	.022044	.021578	.021141	.020729	L. H. 3/

1/ Based on a tare weight of 23.3 tons and a ratio of empty car miles to loaded car miles of 0.350. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 15 (Concluded).--TERRITORY NO. 3 - EASTERN, excluding New England but including Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	10
20	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	20
30	3.4	3.3	3.2	3.1	3.0	3.0	[illegible]	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	30
40	3.6	3.5	3.4	3.3	3.2	3.2	[illegible]	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	40
50	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	50
60	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	60
70	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	70
80	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	80
90	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	90
100	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	100
120	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	120
140	5.6	5.5	5.4	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	140
160	6.0	5.9	5.8	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	160
180	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	180
200	6.8	6.7	6.5	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	200
220	7.2	7.1	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.2	5.1	5.1	5.0	4.9	4.8	4.8	4.8	4.7	4.7	220
240	7.6	7.5	7.3	7.2	7.0	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	5.0	5.0	240
260	8.0	7.9	7.7	7.6	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.4	5.3	5.2	260
280	8.5	8.3	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	280
300	8.9	8.7	8.5	8.3	8.2	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	300
320	9.3	9.1	8.9	8.7	8.6	8.4	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.2	6.1	320
340	9.7	9.5	9.3	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	6.4	340
360	10.1	9.9	9.7	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	360
380	10.5	10.3	10.1	9.9	9.7	9.5	9.4	9.2	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	7.9	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	7.0	380
400	10.9	10.7	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.3	400
420	11.3	11.1	10.9	10.6	10.5	10.3	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.5	420
440	11.7	11.5	11.2	11.0	10.8	10.6	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.0	7.9	7.8	440
460	12.1	11.9	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.2	10.0	9.9	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	460
480	12.5	12.3	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.7	10.5	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.6	8.5	8.4	480
500	12.9	12.7	12.4	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	8.8	8.7	500
600	15.0	14.7	14.4	14.1	13.9	13.6	13.4	13.2	13.0	12.8	12.6	12.4	12.2	12.1	11.9	11.8	11.6	11.5	11.3	11.2	11.1	11.0	10.8	10.7	10.6	10.5	10.4	10.3	10.2	10.1	600
700	17.0	16.7	16.4	16.1	15.8	15.5	15.2	15.0	14.8	14.5	14.3	14.1	13.9	13.8	13.6	13.4	13.2	13.1	12.9	12.8	12.6	12.5	12.4	12.2	12.1	12.0	11.9	11.8	11.7	11.6	700
800	19.0	18.7	18.3	18.0	17.7	17.4	17.1	16.8	16.6	16.3	16.1	15.8	15.6	15.4	15.2	15.0	14.9	14.7	14.5	14.3	14.2	14.0	13.9	13.8	13.6	13.5	13.4	13.2	13.1	13.0	800
900	21.1	20.7	20.3	19.9	19.6	19.2	18.9	18.6	18.3	18.1	17.8	17.6	17.3	17.1	16.9	16.7	16.5	16.3	16.1	15.9	15.7	15.6	15.4	15.3	15.1	15.0	14.8	14.7	14.6	14.4	900
1000	23.1	22.7	22.2	21.8	21.5	21.1	20.8	20.4	20.1	19.8	19.6	19.3	19.0	18.8	18.5	18.3	18.1	17.9	17.7	17.5	17.3	17.1	16.9	16.8	16.6	16.5	16.3	16.2	16.0	15.9	1000
1100	25.1	24.7	24.2	23.8	23.4	23.0	22.6	22.3	21.9	21.6	21.3	21.0	20.7	20.5	20.2	20.0	19.7	19.5	19.3	19.1	18.9	18.7	18.5	18.3	18.1	17.9	17.8	17.6	17.5	17.3	1100
1200	27.2	26.7	26.2	25.7	25.3	24.8	24.5	24.1	23.7	23.4	23.0	22.7	22.4	22.1	21.9	21.6	21.3	21.1	20.9	20.6	20.4	20.2	20.0	19.8	19.6	19.4	19.2	19.1	18.9	18.7	1200
1300	29.2	28.7	28.1	27.6	27.2	26.7	26.3	25.9	25.5	25.1	24.8	24.4	24.1	23.8	23.5	23.2	23.0	22.7	22.4	22.2	22.0	21.7	21.5	21.3	21.1	20.9	20.7	20.5	20.4	20.2	1300
1400	31.2	30.6	30.1	29.6	29.1	28.6	28.1	27.7	27.3	26.9	26.5	26.2	25.8	25.5	25.2	24.9	24.6	24.3	24.0	23.8	23.5	23.3	23.0	22.8	22.6	22.4	22.2	22.0	21.8	21.6	1400
1500	33.3	32.6	32.1	31.5	31.0	30.5	30.0	29.5	29.1	28.7	28.3	27.9	27.5	27.2	26.8	26.5	26.2	25.9	25.6	25.3	25.1	24.8	24.6	24.3	24.1	23.9	23.7	23.5	23.3	23.1	1500
Term. 2/	2.761	2.684	2.611	2.543	2.477	2.416	2.357	2.300	2.247	2.196	2.147	2.100	2.056	2.013	1.972	1.932	1.895	1.858	1.823	1.789	1.757	1.725	1.695	1.666	1.638	1.610	1.584	1.558	1.534	1.510	Term. 2/
L. H. 3/	.020341	.019975	.019628	.019300	.018988	.018693	.018411	.018143	.017887	.017643	.017410	.017187	.016973	.016769	.016572	.016384	.016203	.016029	.015861	.015700	.015545	.015395	.015250	.015110	.014975	.014845	.014719	.014597	.014479	.014364	L. H. 3/

1/ Based on a tare weight of 23.3 tons and a ratio of empty car miles to loaded car miles of 0.350. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 3 - Eastern, excl. N. E. but incl. No. Ill.

FLAT CARS

TABLE 16.—TERRITORY NO. 3 - EASTERN, excluding New England but including Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.6	17.2	14.7	12.9	11.5	10.3	9.4	8.6	8.0	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	10
20	21.8	18.2	15.6	13.7	12.2	11.0	10.0	9.2	8.5	7.9	7.4	6.9	6.5	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	20
30	23.1	19.3	16.6	14.5	12.9	11.7	10.6	9.8	9.0	8.4	7.8	7.4	6.9	6.6	6.2	5.9	5.7	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	30
40	24.4	20.3	17.5	15.3	13.7	12.3	11.2	10.3	9.5	8.9	8.3	7.8	7.4	7.0	6.6	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.0	3.9	3.8	40
50	25.6	21.4	18.4	16.1	14.4	13.0	11.8	10.9	10.1	9.4	8.8	8.3	7.8	7.4	7.0	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	4.1	50
60	26.9	22.5	19.3	17.0	15.1	13.7	12.5	11.4	10.6	9.9	9.2	8.7	8.2	7.8	7.4	7.0	6.7	6.4	6.2	5.9	5.7	5.5	5.3	5.2	5.0	4.8	4.7	4.6	4.4	4.3	60
70	28.1	23.5	20.2	17.8	15.9	14.3	13.1	12.0	11.1	10.4	9.7	9.1	8.6	8.2	7.8	7.4	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.8	4.7	4.6	70
80	29.4	24.6	21.2	18.6	16.6	15.0	13.7	12.6	11.7	10.9	10.2	9.6	9.0	8.6	8.2	7.8	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	80
90	30.6	25.6	22.1	19.4	17.3	15.6	14.3	13.1	12.2	11.4	10.6	10.0	9.5	9.0	8.5	8.1	7.8	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.1	90
100	31.9	26.7	23.0	20.2	18.0	16.3	14.9	13.7	12.7	11.9	11.1	10.5	9.9	9.4	8.9	8.5	8.1	7.8	7.5	7.2	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.6	5.4	5.3	100
120	34.4	28.8	24.8	21.8	19.5	17.6	16.1	14.8	13.8	12.9	12.0	11.3	10.7	10.2	9.7	9.2	8.9	8.5	8.2	7.9	7.6	7.3	7.1	6.9	6.6	6.5	6.3	6.1	5.9	5.8	120
140	36.9	31.0	26.7	23.5	21.0	19.0	17.3	16.0	14.8	13.8	13.0	12.2	11.6	11.0	10.5	10.0	9.6	9.2	8.8	8.5	8.2	7.9	7.7	7.4	7.2	7.0	6.8	6.6	6.4	6.3	140
160	39.5	33.1	28.5	25.1	22.4	20.3	18.6	17.1	15.9	14.8	13.9	13.1	12.4	11.8	11.2	10.7	10.3	9.9	9.5	9.1	8.8	8.5	8.2	8.0	7.8	7.5	7.3	7.1	6.9	6.8	160
180	42.0	35.2	30.4	26.7	23.9	21.6	19.8	18.2	16.9	15.8	14.8	14.0	13.3	12.6	12.0	11.5	11.0	10.5	10.1	9.8	9.4	9.1	8.8	8.6	8.3	8.1	7.8	7.6	7.5	7.3	180
200	44.5	37.3	32.2	28.3	25.4	23.0	21.0	19.4	18.0	16.8	15.8	14.9	14.1	13.4	12.8	12.2	11.7	11.2	10.8	10.4	10.0	9.7	9.4	9.1	8.9	8.6	8.4	8.2	8.0	7.8	200
220	47.0	39.4	34.0	30.0	26.8	24.3	22.2	20.5	19.0	17.8	16.7	15.8	14.9	14.2	13.5	12.9	12.4	11.9	11.5	11.0	10.7	10.3	10.0	9.7	9.4	9.1	8.9	8.7	8.5	8.3	220
240	49.5	41.6	35.9	31.6	28.3	25.6	23.4	21.6	20.1	18.8	17.7	16.7	15.8	15.0	14.3	13.7	13.1	12.6	12.1	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.4	9.2	9.0	8.7	240
260	52.0	43.7	37.7	33.2	29.7	27.0	24.7	22.8	21.2	19.8	18.6	17.5	16.6	15.8	15.1	14.4	13.8	13.3	12.8	12.3	11.9	11.5	11.2	10.8	10.5	10.2	10.0	9.7	9.5	9.2	260
280	54.6	45.8	39.5	34.9	31.2	28.3	25.9	23.9	22.2	20.8	19.5	18.4	17.5	16.6	15.8	15.1	14.5	13.9	13.4	13.0	12.5	12.1	11.7	11.4	11.1	10.8	10.5	10.2	10.0	9.7	280
300	57.1	47.9	41.4	36.5	32.7	29.6	27.1	25.0	23.3	21.8	20.5	19.3	18.3	17.4	16.6	15.9	15.2	14.6	14.1	13.6	13.1	12.7	12.3	12.0	11.6	11.3	11.0	10.7	10.5	10.2	300
320	59.6	50.0	43.2	38.1	34.1	30.9	28.3	26.2	24.3	22.8	21.4	20.2	19.1	18.2	17.4	16.6	15.9	15.3	14.7	14.2	13.7	13.3	12.9	12.5	12.2	11.8	11.5	11.2	11.0	10.7	320
340	62.1	52.2	45.1	39.7	35.6	32.3	29.6	27.3	25.4	23.8	22.3	21.1	20.0	19.0	18.1	17.4	16.6	16.0	15.4	14.9	14.4	13.9	13.5	13.1	12.7	12.4	12.1	11.8	11.5	11.2	340
360	64.6	54.3	46.9	41.4	37.0	33.6	30.8	28.4	26.4	24.7	23.3	22.0	20.8	19.8	18.9	18.1	17.3	16.7	16.1	15.5	15.0	14.5	14.1	13.7	13.3	12.9	12.6	12.3	12.0	11.7	360
380	67.1	56.4	48.7	43.0	38.5	34.9	32.0	29.6	27.5	25.7	24.2	22.9	21.7	20.6	19.7	18.8	18.1	17.4	16.7	16.1	15.6	15.1	14.6	14.2	13.8	13.5	13.1	12.8	12.5	12.2	380
400	69.7	58.5	50.6	44.6	40.0	36.3	33.2	30.7	28.6	26.7	25.1	23.7	22.5	21.4	20.4	19.6	18.8	18.0	17.4	16.8	16.2	15.7	15.2	14.8	14.4	14.0	13.6	13.3	13.0	12.7	400
420	72.2	60.6	52.4	46.2	41.4	37.6	34.4	31.8	29.6	27.7	26.1	24.6	23.3	22.2	21.2	20.3	19.5	18.7	18.0	17.4	16.8	16.3	15.8	15.4	14.9	14.5	14.2	13.8	13.5	13.2	420
440	74.7	62.8	54.3	47.9	42.9	38.9	35.7	33.0	30.7	28.7	27.0	25.5	24.2	23.0	22.0	21.0	20.2	19.4	18.7	18.1	17.5	16.9	16.4	15.9	15.5	15.1	14.7	14.3	14.0	13.7	440
460	77.2	64.9	56.1	49.5	44.4	40.2	36.9	34.1	31.7	29.7	27.9	26.4	25.0	23.8	22.7	21.8	20.9	20.1	19.4	18.7	18.1	17.5	17.0	16.5	16.0	15.6	15.2	14.8	14.5	14.2	460
480	79.7	67.0	57.9	51.1	45.9	41.6	38.1	35.2	32.8	30.7	28.9	27.3	25.9	24.6	23.5	22.5	21.6	20.8	20.0	19.3	18.7	18.1	17.6	17.1	16.6	16.1	15.7	15.4	15.0	14.7	480
500	82.2	69.1	59.8	52.7	47.3	42.9	39.3	36.4	33.8	31.7	29.8	28.2	26.7	25.4	24.3	23.2	22.3	21.5	20.7	20.0	19.3	18.7	18.1	17.6	17.1	16.7	16.3	15.9	15.5	15.1	500
600	94.8	79.7	69.0	60.9	54.6	49.6	45.4	42.0	39.1	36.6	34.5	32.6	30.9	29.4	28.1	26.9	25.8	24.9	24.0	23.2	22.4	21.7	21.1	20.5	19.9	19.4	18.9	18.4	18.0	17.6	600
700	107.4	90.3	78.2	69.0	61.9	56.2	51.6	47.7	44.4	41.6	39.1	37.0	35.1	33.5	32.0	30.6	29.4	28.3	27.3	26.3	25.5	24.7	24.0	23.3	22.7	22.1	21.5	21.0	20.5	20.1	700
800	120.0	100.9	87.3	77.1	69.2	62.9	57.7	53.3	49.7	46.5	43.8	41.4	39.3	37.5	35.8	34.3	32.9	31.7	30.6	29.5	28.6	27.7	26.9	26.1	25.4	24.8	24.2	23.6	23.0	22.5	800
900	132.6	111.6	96.5	85.3	76.5	69.5	63.8	59.0	55.0	51.5	48.5	45.9	43.5	41.5	39.6	38.0	36.5	35.1	33.9	32.7	31.7	30.7	29.8	29.0	28.2	27.5	26.8	26.1	25.5	25.0	900
1000	145.2	122.2	105.7	93.4	83.8	72.2	69.9	64.7	60.2	56.4	53.2	50.3	47.7	45.5	43.5	41.7	40.0	38.5	37.2	35.9	34.8	33.7	32.7	31.8	30.9	30.2	29.4	28.7	28.1	27.4	1000
1100	157.7	132.8	114.9	101.5	91.1	82.8	76.0	70.3	65.5	61.4	57.8	54.7	51.9	49.5	47.3	45.3	43.6	41.9	40.4	39.1	37.8	36.7	35.6	34.6	33.7	32.8	32.0	31.3	30.6	29.9	1100
1200	170.3	143.4	124.1	109.7	98.4	89.5	82.1	76.0	70.8	66.3	62.5	59.1	56.2	53.5	51.1	49.0	47.1	45.3	43.7	42.3	40.9	39.7	38.5	37.5	36.5	35.5	34.7	33.9	33.1	32.4	1200
1300	182.9	154.0	133.3	117.8	105.8	96.1	88.2	81.6	76.1	71.3	67.2	63.6	60.4	57.5	55.0	52.7	50.6	48.8	47.0	45.5	44.0	42.7	41.4	40.3	39.2	38.2	37.3	36.4	35.6	34.8	1300
1400	195.5	164.6	142.5	125.9	113.1	102.8	94.3	87.3	81.4	76.3	71.8	68.0	64.6	61.5	58.8	56.4	54.2	52.2	50.3	48.7	47.1	45.7	44.4	43.1	42.0	40.9	39.9	39.0	38.1	37.3	1400
1500	208.1	175.2	151.7	134.1	120.4	109.4	100.4	93.0	86.6	81.2	76.5	72.4	68.8	65.5	62.7	60.1	57.7	55.6	53.6	51.8	50.2	48.7	47.3	46.0	44.8	43.6	42.6	41.6	40.6	39.7	1500
Term. 2/	19.324	16.103	13.803	12.076	10.736	9.662	8.784	8.052	7.432	6.901	6.441	6.039	5.684	5.368	5.085	4.831	4.601	4.392	4.201	4.026	3.865	3.716	3.579	3.451	3.332	3.221	3.117	3.019	2.928	2.842	Term. 2/
L. H. 3/	.125840	.106058	.091929	.081331	.073089	.066495	.061100	.056604	.052800	.049539	.046713	.044241	.042059	.040119	.038384	.036823	.035410	.034125	.032952	.031877	.030888	.029975	.029130	.028345	.027614	.026932	.026294	.025695	.025133	.024604	L. H. 3/

1/ Based on a tare weight of 20.6 tons and a ratio of empty car miles to loaded car miles of 0.839. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 25 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 16 (Concluded).—TERRITORY NO. 3 - EASTERN, excluding New England but including Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Territory No. 3 - Eastern, excl. N. E. but incl. No. Ill.

FLAT CARS

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	10
20	3.2	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	20
30	3.5	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	30
40	3.7	3.6	3.5	3.5	3.4	3.3		3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	40
50	4.0	3.9	3.8	3.7	3.6	3.5		3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	50
60	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	60
70	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	70
80	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	80
90	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	90
100	5.2	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	100
120	5.7	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	120
140	6.1	6.0	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	140
160	6.6	6.5	6.3	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	160
180	7.1	6.9	6.8	6.6	6.5	6.4	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	180
200	7.6	7.4	7.2	7.1	7.0	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	5.0	4.9	4.8	4.8	200
220	8.1	7.9	7.7	7.6	7.4	7.3	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	220
240	8.5	8.4	8.2	8.0	7.8	7.7	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	240
260	9.0	8.8	8.6	8.5	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.8	260
280	9.5	9.3	9.1	8.9	8.7	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.2	6.1	280
300	10.0	9.8	9.6	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	300
320	10.5	10.2	10.0	9.8	9.6	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.8	320
340	11.0	10.7	10.5	10.3	10.1	9.9	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	340
360	11.4	11.2	11.0	10.7	10.5	10.3	10.1	10.0	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	360
380	11.9	11.7	11.4	11.2	11.0	10.8	10.6	10.4	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	380
400	12.4	12.1	11.9	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	400
420	12.9	12.6	12.4	12.1	11.9	11.7	11.4	11.2	11.0	10.9	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	420
440	13.4	13.1	12.8	12.6	12.3	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.8	10.6	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	440
460	13.8	13.6	13.3	13.0	12.8	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.2	11.0	10.8	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.4	9.3	9.3	9.2	9.1	460
480	14.3	14.0	13.7	13.5	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.4	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	480
500	14.8	14.5	14.2	13.9	13.7	13.4	13.2	12.9	12.7	12.5	12.3	12.1	11.9	11.8	11.6	11.4	11.3	11.1	11.0	10.9	10.7	10.6	10.5	10.4	10.2	10.1	10.0	9.9	9.8	9.7	500
600	17.2	16.9	16.5	16.2	15.9	15.6	15.3	15.1	14.8	14.6	14.3	14.1	13.9	13.7	13.5	13.3	13.2	13.0	12.8	12.7	12.5	12.4	12.2	12.1	12.0	11.8	11.7	11.6	11.5	11.4	600
700	19.6	19.2	18.8	18.5	18.1	17.8	17.5	17.2	16.9	16.6	16.4	16.1	15.9	15.7	15.5	15.2	15.0	14.9	14.7	14.5	14.3	14.1	14.0	13.8	13.7	13.5	13.4	13.3	13.1	13.0	700
800	22.0	21.6	21.2	20.8	20.4	20.0	19.7	19.3	19.0	18.7	18.4	18.1	17.9	17.6	17.4	17.1	16.9	16.7	16.5	16.3	16.1	15.9	15.7	15.6	15.4	15.2	15.1	14.9	14.8	14.6	800
900	24.5	24.0	23.5	23.0	22.6	22.2	21.8	21.5	21.1	20.8	20.5	20.1	19.9	19.6	19.3	19.0	18.8	18.6	18.3	18.1	17.9	17.7	17.5	17.3	17.1	16.9	16.8	16.6	16.4	16.3	900
1000	26.9	26.3	25.8	25.3	24.8	24.4	24.0	23.6	23.2	22.8	22.5	22.2	21.8	21.5	21.2	21.0	20.7	20.4	20.2	19.9	19.7	19.5	19.3	19.0	18.8	18.7	18.5	18.3	18.1	17.9	1000
1100	29.3	28.7	28.1	27.6	27.1	26.6	26.1	25.7	25.3	24.9	24.5	24.2	23.8	23.5	23.2	22.9	22.6	22.3	22.0	21.7	21.5	21.2	21.0	20.8	20.6	20.4	20.2	20.0	19.8	19.6	1100
1200	31.7	31.0	30.4	29.9	29.3	28.8	28.3	27.8	27.4	27.0	26.6	26.2	25.8	25.5	25.1	24.8	24.4	24.1	23.8	23.6	23.3	23.0	22.8	22.5	22.3	22.1	21.8	21.6	21.4	21.2	1200
1300	34.1	33.4	32.8	32.1	31.6	31.0	30.5	30.0	29.5	29.0	28.6	28.2	27.8	27.4	27.0	26.7	26.3	26.0	25.7	25.4	25.1	24.8	24.5	24.3	24.0	23.8	23.5	23.3	23.1	22.9	1300
1400	36.5	35.8	35.1	34.4	33.8	33.2	32.6	32.1	31.6	31.1	30.6	30.2	29.7	29.3	28.9	28.6	28.2	27.8	27.5	27.2	26.9	26.6	26.3	26.0	25.7	25.5	25.2	25.0	24.7	24.5	1400
1500	38.9	38.1	37.4	36.7	36.0	35.4	34.8	34.2	33.7	33.2	32.7	32.2	31.7	31.3	30.9	30.5	30.1	29.7	29.3	29.0	28.7	28.3	28.0	27.7	27.5	27.2	26.9	26.6	26.4	26.1	1500
Term. 2/	2.761	2.684	2.611	2.543	2.477	2.416	2.357	2.300	2.247	2.196	2.147	2.100	2.056	2.013	1.972	1.932	1.895	1.858	1.823	1.789	1.757	1.725	1.695	1.666	1.638	1.610	1.584	1.558	1.534	1.510	Term. 2/
L. H. 3/	.024106	.023635	.023189	.022767	.022367	.021986	.021624	.021280	.020951	.020638	.020338	.020051	.019777	.019514	.019261	.019019	.018786	.018563	.018347	.018140	.017940	.017747	.017561	.017382	.017208	.017041	.016879	.016722	.016570	.016423	L. H. 3/

1/ Based on a tare weight of 20.6 tons and a ratio of empty car miles to loaded car miles of 0.839. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 3 - Eastern, excl. N. E. but incl. No. Ill.

GONDOLA AND HOPPER CARS

TABLE 17.—TERRITORY NO. 3 - EASTERN, excluding New England but including Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.6	17.2	14.8	12.9	11.5	10.3	9.4	8.6	8.0	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.7	4.5	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	10
20	21.9	18.3	15.7	13.8	12.2	11.0	10.0	9.2	8.5	7.9	7.4	7.0	6.5	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.5	3.4	3.3	20
30	23.2	19.4	16.7	14.6	13.0	11.7	10.7	9.8	9.1	8.4	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	30
40	24.5	20.5	17.6	15.4	13.8	12.4	11.3	10.4	9.6	8.9	8.4	7.9	7.4	7.0	6.7	6.3	6.1	5.8	5.6	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9	40
50	25.8	21.6	18.5	16.3	14.5	13.1	11.9	11.0	10.2	9.5	8.8	8.3	7.8	7.4	7.1	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.5	4.3	4.2	4.1	50
60	27.1	22.7	19.5	17.1	15.3	13.8	12.6	11.6	10.7	10.0	9.3	8.8	8.3	7.8	7.5	7.1	6.8	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.5	4.4	60
70	28.4	23.8	20.4	18.0	16.0	14.5	13.2	12.1	11.2	10.5	9.8	9.2	8.7	8.3	7.8	7.5	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.7	4.6	70
80	29.7	24.9	21.4	18.8	16.8	15.1	13.8	12.7	11.8	11.0	10.3	9.7	9.1	8.7	8.2	7.9	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.9	80
90	31.0	26.0	22.3	19.6	17.5	15.8	14.5	13.3	12.3	11.5	10.8	10.1	9.6	9.1	8.6	8.2	7.9	7.5	7.2	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	90
100	32.3	27.1	23.3	20.5	18.3	16.5	15.1	13.9	12.9	12.0	11.3	10.6	10.0	9.5	9.0	8.6	8.2	7.9	7.6	7.3	7.0	6.8	6.6	6.4	6.2	6.0	5.8	5.7	5.5	5.4	100
120	34.9	29.2	25.2	22.2	19.8	17.9	16.3	15.1	14.0	13.0	12.2	11.5	10.9	10.3	9.8	9.4	9.0	8.6	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.4	6.2	6.0	5.9	120
140	37.5	31.4	27.0	23.8	21.3	19.3	17.6	16.2	15.1	14.0	13.2	12.4	11.7	11.1	10.6	10.1	9.7	9.3	8.9	8.6	8.3	8.0	7.8	7.5	7.3	7.1	6.9	6.7	6.5	6.4	140
160	40.1	33.6	29.0	25.5	22.8	20.6	18.9	17.4	16.1	15.1	14.1	13.3	12.6	12.0	11.4	10.9	10.4	10.0	9.6	9.3	8.9	8.6	8.4	8.1	7.9	7.6	7.4	7.2	7.1	6.9	160
180	42.7	35.8	30.9	27.2	24.3	22.0	20.1	18.6	17.2	16.1	15.1	14.2	13.5	12.8	12.2	11.6	11.2	10.7	10.3	9.9	9.6	9.3	9.0	8.7	8.4	8.2	8.0	7.8	7.6	7.4	180
200	45.3	38.0	32.8	28.9	25.8	23.4	21.4	19.7	18.3	17.1	16.1	15.1	14.3	13.6	13.0	12.4	11.9	11.4	11.0	10.6	10.2	9.9	9.6	9.3	9.0	8.7	8.5	8.3	8.1	7.9	200
220	47.9	40.2	34.7	30.5	27.3	24.8	22.6	20.9	19.4	18.1	17.0	16.1	15.2	14.5	13.8	13.2	12.6	12.1	11.7	11.2	10.8	10.5	10.2	9.9	9.6	9.3	9.1	8.8	8.6	8.4	220
240	50.5	42.4	36.6	32.2	28.8	26.1	23.9	22.1	20.5	19.2	18.0	17.0	16.1	15.3	14.6	13.9	13.3	12.8	12.3	11.9	11.5	11.1	10.8	10.4	10.1	9.9	9.6	9.3	9.1	8.9	240
260	53.1	44.6	38.5	33.9	30.3	27.5	25.2	23.2	21.6	20.2	19.0	17.9	16.9	16.1	15.4	14.7	14.1	13.5	13.0	12.5	12.1	11.7	11.4	11.0	10.7	10.4	10.1	9.9	9.6	9.4	260
280	55.7	46.8	40.4	35.6	31.9	28.9	26.4	24.4	22.7	21.2	19.9	18.8	17.8	16.9	16.1	[illegible]	14.8	14.2	13.7	13.2	12.7	12.3	12.0	11.6	11.3	11.0	10.7	10.4	10.1	9.9	280
300	58.3	49.0	42.3	37.3	33.4	30.2	27.7	25.6	23.8	22.2	20.9	19.7	18.7	17.8	16.9	[illegible]	15.5	14.9	14.4	13.9	13.4	13.0	12.6	12.2	11.8	11.5	11.2	10.9	10.7	10.4	300
320	60.9	51.2	44.2	38.9	34.9	31.6	28.9	26.7	24.8	23.2	21.8	20.6	19.5	18.6	17.7	17.0	16.3	15.6	15.0	14.5	14.0	13.6	13.1	12.8	12.4	12.1	11.7	11.5	11.2	10.9	320
340	63.5	53.4	46.1	40.6	36.4	33.0	30.2	27.9	25.9	24.3	22.8	21.5	20.4	19.4	18.5	17.7	17.0	16.3	15.7	15.2	14.7	14.2	13.7	13.3	13.0	12.6	12.3	12.0	11.7	11.4	340
360	66.1	55.5	48.0	42.3	37.9	34.4	31.5	29.1	27.0	25.3	23.8	22.4	21.3	20.2	19.3	18.5	17.7	17.0	16.4	15.8	15.3	14.8	14.3	13.9	13.5	13.2	12.8	12.5	12.2	11.9	360
380	68.7	57.7	49.9	44.0	39.4	35.7	32.7	30.2	28.1	26.3	24.7	23.3	22.1	21.1	20.1	19.2	18.4	17.7	17.1	16.5	15.9	15.4	14.9	14.5	14.1	13.7	13.4	13.0	12.7	12.4	380
400	71.3	59.9	51.8	45.7	40.9	37.1	34.0	31.4	29.2	27.3	25.7	24.3	23.0	21.9	20.9	20.0	19.2	18.4	17.7	17.1	16.6	16.0	15.5	15.1	14.7	14.3	13.9	13.6	13.2	12.9	400
420	73.9	62.1	53.7	47.3	42.4	38.5	35.2	32.6	30.3	28.3	26.6	25.2	23.9	22.7	21.7	20.7	19.9	19.1	18.4	17.8	17.2	16.6	16.1	15.7	15.2	14.8	14.4	14.1	13.8	13.4	420
440	76.5	64.3	55.6	49.0	43.9	39.8	36.5	33.7	31.4	29.4	27.6	26.1	24.7	23.5	22.5	21.5	20.6	19.8	19.1	18.4	17.8	17.3	16.7	16.3	15.8	15.4	15.0	14.6	14.3	13.9	440
460	79.1	66.5	57.5	50.7	45.4	41.2	37.8	34.9	32.5	30.4	28.6	27.0	25.6	24.4	23.2	22.3	21.3	20.5	19.8	19.1	18.5	17.9	17.3	16.8	16.4	15.9	15.5	15.1	14.8	14.4	460
480	81.7	68.7	59.4	52.4	46.9	42.6	39.0	36.1	33.6	31.4	29.5	27.9	26.5	25.2	24.0	23.0	22.1	21.2	20.5	19.7	19.1	18.5	17.9	17.4	16.9	16.5	16.1	15.7	15.3	14.9	480
500	84.3	70.9	61.3	54.1	48.4	44.0	40.3	37.2	34.6	32.4	30.5	28.8	27.3	26.0	24.8	23.8	22.8	21.9	21.1	20.4	19.7	19.1	18.5	18.0	17.5	17.0	16.6	16.2	15.8	15.5	500
600	97.3	81.8	70.8	62.5	56.0	50.8	46.6	43.1	40.1	37.5	35.3	33.4	31.7	30.1	28.8	27.6	26.4	25.4	24.5	23.7	22.9	22.2	21.5	20.9	20.3	19.8	19.3	18.8	18.4	18.0	600
700	110.4	92.8	80.3	70.8	63.5	57.7	52.9	48.9	45.5	42.6	40.1	37.9	36.0	34.3	32.7	31.3	30.1	28.9	27.9	27.0	26.1	25.3	24.5	23.8	23.2	22.6	22.0	21.5	21.0	20.5	700
800	123.4	103.7	89.7	79.2	71.1	64.5	59.2	54.7	51.0	47.7	44.9	42.5	40.3	38.4	36.7	35.1	33.7	32.5	31.3	30.2	29.2	28.3	27.5	26.7	26.0	25.3	24.7	24.1	23.5	23.0	800
900	136.4	114.7	99.2	87.6	78.6	71.4	65.5	60.6	56.4	52.8	49.7	47.0	44.6	42.5	40.6	38.9	37.4	36.0	34.7	33.5	32.4	31.4	30.5	29.6	28.8	28.1	27.4	26.7	26.1	25.5	900
1000	149.4	125.7	108.7	96.0	86.2	78.3	71.8	66.4	61.8	57.9	54.6	51.6	49.0	46.7	44.6	42.7	41.0	39.5	38.1	36.8	35.6	34.5	33.5	32.5	31.7	30.9	30.1	29.4	28.7	28.1	1000
1100	162.4	136.6	118.2	104.4	93.7	85.1	78.1	72.2	67.3	63.0	59.4	56.1	53.3	50.8	48.5	46.5	44.7	43.0	41.5	40.1	38.8	37.6	36.5	35.5	34.5	33.6	32.8	32.0	31.3	30.6	1100
1200	175.4	147.6	127.7	112.8	101.2	92.0	84.4	78.1	72.7	68.1	64.2	60.7	57.6	54.9	52.5	50.3	48.3	46.5	44.8	43.3	41.9	40.7	39.5	38.4	37.3	36.4	35.5	34.6	33.9	33.1	1200
1300	188.4	158.5	137.2	121.2	108.8	98.8	90.7	83.9	78.2	73.3	69.0	65.3	62.0	59.0	56.4	54.1	51.9	50.0	48.2	46.6	45.1	43.7	42.5	41.3	40.2	39.1	38.2	37.3	36.4	35.6	1300
1400	201.4	169.5	146.7	129.6	116.3	105.7	97.0	89.7	83.6	78.4	73.8	69.8	66.3	63.2	60.4	57.9	55.6	53.5	51.6	49.9	48.3	46.8	45.4	44.2	43.0	41.9	40.9	39.9	39.0	38.2	1400
1500	214.4	180.4	156.2	138.0	123.9	112.6	103.3	95.6	89.1	83.5	78.6	74.4	70.6	67.3	64.3	61.6	59.2	57.0	55.0	53.2	51.5	49.9	48.4	47.1	45.8	44.7	43.6	42.5	41.6	40.7	1500
Term. 2/	19.324	16.103	13.803	12.078	10.736	9.662	8.784	8.052	7.432	6.901	6.441	6.039	5.684	5.368	5.085	4.831	4.601	4.392	4.201	4.026	3.865	3.716	3.579	3.451	3.332	3.221	3.117	3.019	2.928	2.842	Term. 2/
L. H. 3/	.130040	.109558	.094929	.083956	.075422	.068595	.063009	.058354	.054415	.051039	.048113	.045553	.043294	.041286	.039489	.037873	.036410	.035080	.033865	.032752	.031728	.030783	.029907	.029095	.028338	.027632	.026971	.026352	.025770	.025222	L. H. 3/

1/ Based on a tare weight of 22.1 tons and a ratio of empty car miles to loaded car miles of 0.843. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 17 (Concluded).--TERRITORY NO. 3 - EASTERN, excluding New England but including Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	10
20	3.3	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	20
30	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	30
40	3.7	3.7	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	40
50	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	50
60	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	60
70	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	70
80	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.9	80
90	5.0	4.9	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	90
100	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	100
120	5.7	5.6	5.5	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	120
140	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.3	5.2	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.9	140
160	6.7	6.6	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	160
180	7.2	7.0	6.9	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	180
200	7.7	7.5	7.4	7.2	7.1	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	200
220	8.2	8.0	7.8	7.7	7.5	7.4	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.3	5.2	220
240	8.7	8.5	8.3	8.1	8.0	7.8	7.7	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	240
260	9.2	9.0	8.8	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.9	260
280	9.7	9.5	9.3	9.1	8.9	8.7	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	280
300	10.2	9.9	9.7	9.5	9.3	9.2	9.0	8.8	8.7	8.5	8.4	8.3	8.1	8.0	7.9	7.8	7.7	7.5	7.4	7.3	7.3	7.2	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.5	300
320	10.7	10.4	10.2	10.0	9.8	9.6	9.4	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	6.9	6.9	320
340	11.2	10.9	10.7	10.5	10.3	10.1	9.9	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	340
360	11.7	11.4	11.2	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.6	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.2	8.1	8.1	8.0	7.9	7.8	7.7	7.6	7.5	360
380	12.1	11.9	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.7	9.6	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.9	380
400	12.6	12.4	12.1	11.9	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.1	10.0	9.8	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	400
420	13.1	12.9	12.6	12.3	12.1	11.9	11.7	11.4	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	420
440	13.6	13.3	13.1	12.8	12.6	12.3	12.1	11.9	11.7	11.5	11.3	11.1	11.0	10.8	10.6	10.5	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	440
460	14.1	13.8	13.5	13.3	13.0	12.8	12.5	12.3	12.1	11.9	11.7	11.5	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	460
480	14.6	14.3	14.0	13.7	13.5	13.2	13.0	12.8	12.5	12.3	12.1	11.9	11.8	11.6	11.4	11.3	11.1	11.0	10.8	10.7	10.6	10.4	10.3	10.2	10.1	10.0	9.9	9.7	9.6	9.6	480
500	15.1	14.8	14.5	14.2	13.9	13.7	13.4	13.2	13.0	12.8	12.5	12.4	12.2	12.0	11.8	11.7	11.5	11.3	11.2	11.1	10.9	10.8	10.7	10.5	10.4	10.3	10.2	10.1	10.0	9.9	500
600	17.6	17.2	16.9	16.5	16.2	15.9	15.6	15.4	15.1	14.9	14.6	14.4	14.2	14.0	13.8	13.6	13.4	13.2	13.1	12.9	12.8	12.6	12.5	12.3	12.2	12.0	11.9	11.8	11.7	11.6	600
700	20.1	19.6	19.2	18.9	18.5	18.2	17.9	17.5	17.3	17.0	16.7	16.5	16.2	16.0	15.8	15.5	15.3	15.1	14.9	14.8	14.6	14.4	14.2	14.1	13.9	13.8	13.6	13.5	13.4	13.2	700
800	22.5	22.1	21.6	21.2	20.8	20.4	20.1	19.7	19.4	19.1	18.8	18.5	18.2	18.0	17.7	17.5	17.3	17.0	16.8	16.6	16.4	16.2	16.0	15.9	15.7	15.5	15.4	15.2	15.1	14.9	800
900	25.0	24.5	24.0	23.5	23.1	22.7	22.3	21.9	21.5	21.2	20.9	20.6	20.3	20.0	19.7	19.4	19.2	18.9	18.7	18.5	18.3	18.0	17.8	17.6	17.4	17.3	17.1	16.9	16.7	16.6	900
1000	27.5	26.9	26.4	25.9	25.4	24.9	24.5	24.1	23.7	23.3	23.0	22.6	22.3	22.0	21.7	21.4	21.1	20.8	20.6	20.3	20.1	19.8	19.6	19.4	19.2	19.0	18.8	18.6	18.4	18.3	1000
1100	29.9	29.3	28.7	28.2	27.7	27.2	26.7	26.3	25.8	25.4	25.0	24.7	24.3	24.0	23.6	23.3	23.0	22.7	22.4	22.2	21.9	21.7	21.4	21.2	21.0	20.7	20.5	20.3	20.1	19.9	1100
1200	32.4	31.7	31.1	30.5	30.0	29.4	28.9	28.4	28.0	27.5	27.1	26.7	26.3	26.0	25.6	25.3	24.9	24.6	24.3	24.0	23.7	23.5	23.2	23.0	22.7	22.5	22.3	22.0	21.8	21.6	1200
1300	34.9	34.2	33.5	32.9	32.3	31.7	31.1	30.6	30.1	29.6	29.2	28.8	28.3	27.9	27.6	27.2	26.9	26.5	26.2	25.9	25.6	25.3	25.0	24.7	24.5	24.2	24.0	23.7	23.5	23.3	1300
1400	37.3	36.6	35.9	35.2	34.5	33.9	33.3	32.8	32.3	31.8	31.3	30.8	30.4	29.9	29.5	29.1	28.8	28.4	28.1	27.7	27.4	27.1	26.8	26.5	26.2	26.0	25.7	25.4	25.2	25.0	1400
1500	39.8	39.0	38.2	37.5	36.8	36.2	35.6	35.0	34.4	33.9	33.4	32.9	32.4	31.9	31.5	31.1	30.7	30.3	29.9	29.6	29.2	28.9	28.6	28.3	28.0	27.7	27.4	27.1	26.9	26.6	1500
Term. 2/	2.761	2.684	2.611	2.543	2.477	2.416	2.357	2.300	2.247	2.196	2.147	2.100	2.056	2.013	1.972	1.932	1.895	1.858	1.823	1.789	1.757	1.725	1.695	1.666	1.638	1.610	1.584	1.558	1.534	1.510	Term. 2/
L. H. 3/	.024706	.024218	.023757	.023320	.022905	.022511	.022137	.021780	.021440	.021115	.020804	.020508	.020223	.019951	.019690	.019439	.019198	.018966	.018743	.018529	.018322	.018122	.017930	.017744	.017564	.017391	.017223	.017060	.016903	.016751	L. H. 3/

1/ Based on a tare weight of 22.1 tons and a ratio of empty car miles to loaded car miles of 0.843. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 3 - Eastern, excl. N. E. but incl. No. Ill.

TANK CARS

TABLE 18.—TERRITORY NO. 3 - EASTERN, excluding New England but including Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.7	14.8	12.7	11.1	9.9	8.9	8.1	7.4	6.9	6.4	5.9	5.6	5.3	5.0	4.7	4.5	4.3	4.1	3.9	3.7	3.6	3.5	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.7	10
20	19.2	16.0	13.7	12.0	10.7	9.6	8.8	8.1	7.5	6.9	6.5	6.1	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	20
30	20.6	17.2	14.8	12.9	11.5	10.4	9.5	8.7	8.0	7.5	7.0	6.6	6.2	5.9	5.6	5.3	5.1	4.8	4.6	4.5	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	30
40	22.0	18.4	15.8	13.9	12.4	11.2	10.2	9.3	8.6	8.1	7.5	7.1	6.7	6.3	6.0	5.7	5.5	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	40
50	23.5	19.6	16.9	14.8	13.2	11.9	10.9	10.0	9.2	8.6	8.1	7.6	7.2	6.8	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9	3.8	50
60	24.9	20.8	17.9	15.7	14.0	12.7	11.6	10.6	[illegible]	9.2	8.6	8.1	7.6	7.2	6.9	6.5	6.3	6.0	5.8	5.5	5.3	5.1	5.0	4.8	4.6	4.5	4.4	4.3	4.1	4.0	60
70	26.3	22.0	19.0	16.7	14.9	13.4	12.3	11.[illegible]	[illegible]	9.7	9.1	8.6	8.1	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.5	4.4	4.3	70
80	27.8	23.3	20.0	17.6	15.7	14.2	12.9	11.[illegible]	11.0	[illegible]0.3	9.6	9.1	8.6	[illegible]8.1	7.7	7.4	7.1	6.8	6.5	6.2	6.0	5.8	5.6	5.4	5.3	[illegible]5.1	5.0	4.8	4.7	4.6	80
90	29.2	24.5	21.1	18.5	16.5	14.9	13.6	12.6	11.6	10.9	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.1	6.9	6.6	6.4	6.1	5.9	5.7	5.6	5.4	5.3	5.1	5.0	4.8	90
100	30.7	25.7	22.1	19.4	17.4	15.7	14.3	13.2	12.2	11.4	10.7	10.1	9.5	9.0	8.6	8.2	7.8	7.5	7.2	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.3	5.1	100
120	33.6	28.1	24.2	21.3	19.0	17.2	15.7	14.5	13.4	12.5	11.8	11.1	10.5	9.9	9.5	9.0	8.6	8.3	8.0	7.7	7.4	7.1	6.9	6.7	6.5	6.3	6.1	6.0	5.8	5.7	120
140	36.4	30.5	26.3	23.1	20.7	18.7	17.1	15.8	14.6	13.7	12.8	12.1	11.4	10.8	10.3	9.9	9.4	9.1	8.7	8.4	8.1	7.8	7.6	7.3	7.1	6.9	6.7	6.5	6.4	6.2	140
160	39.3	33.0	28.4	25.0	22.4	20.2	18.5	17.1	15.8	14.8	13.9	13.1	12.4	11.7	11.2	10.7	10.2	9.8	9.4	9.1	8.8	8.5	8.2	8.0	7.7	7.5	7.3	7.1	6.9	6.8	160
180	42.2	35.4	30.5	26.9	24.0	21.7	19.9	18.3	17.0	15.9	14.9	14.1	13.3	12.7	12.1	11.5	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.3	8.1	7.9	7.7	7.5	7.3	180
200	45.1	37.8	32.6	28.7	25.7	23.3	21.3	19.6	18.2	17.0	16.0	15.1	14.3	13.6	12.9	12.3	11.8	11.4	10.9	10.5	10.2	9.8	9.5	9.2	9.0	8.7	8.5	8.3	8.0	7.8	200
220	48.0	40.2	34.7	30.6	27.3	24.8	22.7	20.9	19.4	18.1	17.0	16.1	15.2	14.5	13.8	13.2	12.6	12.1	11.7	11.2	10.9	10.5	10.2	9.9	9.6	9.3	9.1	8.8	8.6	8.4	220
240	50.8	42.7	36.8	32.4	29.0	26.3	24.0	22.2	20.6	19.3	18.1	17.1	16.2	15.4	14.6	14.0	13.4	12.9	12.4	12.0	11.5	11.2	10.8	10.5	10.2	9.9	9.6	9.4	9.2	8.9	240
260	53.7	45.1	38.9	34.3	30.7	27.8	25.4	23.5	21.8	20.4	19.1	18.1	17.1	16.3	15.5	14.8	14.2	13.6	13.1	12.7	12.2	11.8	11.5	11.1	10.8	10.5	10.2	10.0	9.7	9.5	260
280	56.6	47.5	41.0	36.1	32.3	29.3	26.8	24.8	23.0	21.5	20.2	19.1	18.1	17.2	16.4	15.7	15.0	14.4	13.9	13.4	12.9	12.5	12.1	11.8	11.4	11.1	10.8	10.5	10.3	10.0	280
300	59.5	49.9	43.1	38.0	34.0	30.8	28.2	26.0	24.2	22.6	21.3	20.1	19.0	18.1	17.2	16.5	15.8	15.2	14.6	14.1	13.6	13.2	12.8	12.4	12.0	11.7	11.4	11.1	10.8	10.6	300
320	62.4	52.4	45.2	39.8	35.7	32.3	29.6	27.3	25.4	23.7	22.3	21.1	20.0	19.0	18.1	17.3	16.6	15.9	15.4	14.8	14.3	13.8	13.4	13.0	12.6	12.3	12.0	11.7	11.4	11.1	320
340	65.3	54.8	47.3	41.7	37.3	33.8	31.0	28.6	26.6	24.9	23.4	22.1	20.9	19.9	19.0	18.1	17.4	16.7	16.1	15.5	15.0	14.5	14.1	13.7	13.3	12.9	12.6	12.2	12.0	11.7	340
360	68.1	57.2	49.4	43.6	39.0	35.4	32.4	29.9	27.8	26.0	24.4	23.1	21.9	20.8	19.8	19.0	18.2	17.5	16.8	16.2	15.7	15.2	14.7	14.3	13.9	13.5	13.1	12.8	12.5	12.2	360
380	71.0	59.6	51.5	45.4	40.7	36.9	33.8	31.2	29.0	27.1	25.5	24.1	22.8	21.7	20.7	19.8	19.0	18.2	17.6	16.9	16.4	15.9	15.4	14.9	14.5	14.1	13.7	13.4	13.1	12.8	380
400	73.9	62.1	53.6	47.3	42.3	38.4	35.2	32.5	30.2	28.2	26.5	25.1	23.8	22.6	21.6	20.6	19.8	19.0	18.3	17.7	17.1	16.5	16.0	15.5	15.1	14.7	14.3	14.0	13.6	13.3	400
420	76.8	64.5	55.7	49.1	44.0	39.9	36.5	33.7	31.4	29.4	27.6	26.1	24.7	23.5	22.4	21.4	21.0	19.8	19.0	18.4	17.8	17.2	16.7	16.2	15.7	15.3	14.9	14.5	14.2	13.9	420
440	79.7	66.9	57.8	51.0	45.7	41.4	37.9	35.0	32.6	30.5	28.7	27.1	25.7	24.4	23.3	22.3	21.4	20.5	19.8	19.1	18.5	17.9	17.3	16.8	16.3	15.9	15.5	15.1	14.7	14.4	440
460	82.6	69.3	59.9	52.8	47.3	42.9	39.3	36.3	33.8	31.6	29.7	28.1	26.6	25.3	24.1	23.1	22.2	21.3	20.5	19.8	19.1	18.5	18.0	17.4	17.0	16.5	16.0	15.7	15.3	14.9	460
480	85.4	71.8	62.0	54.7	49.0	44.4	40.7	37.6	35.0	32.7	30.8	29.1	27.6	26.2	25.0	23.9	23.0	22.1	21.3	20.5	19.8	19.2	18.6	18.1	17.6	17.1	16.7	16.2	15.9	15.5	480
500	88.3	74.2	64.1	56.5	50.7	45.9	42.1	38.9	36.2	33.8	31.8	30.1	28.5	27.1	25.9	24.8	23.8	22.8	22.0	21.2	20.5	19.9	19.3	18.7	18.2	17.7	17.2	16.8	16.4	16.0	500
600	102.7	86.3	74.6	65.8	59.0	53.5	49.0	45.3	42.2	[illegible]9.4	37.1	35.1	33.2	31.6	30.2	28.9	27.7	26.7	25.7	24.8	24.0	23.2	22.5	21.9	21.3	20.7	20.2	19.7	19.2	18.8	600
700	117.1	98.5	85.1	75.1	67.3	61.1	56.0	51.7	48.1	[illegible]5.1	42.4	40.0	38.0	36.2	34.5	33.0	31.7	30.5	29.4	28.4	27.4	26.6	25.8	25.0	24.3	23.7	23.1	22.5	22.0	21.5	700
800	131.6	110.6	95.6	84.4	75.6	68.6	62.9	58.1	54.1	50[illegible]	47.7	45.0	42.7	40.7	38.8	37.2	35.7	34.3	33.1	31.9	30.9	29.9	29.0	28.2	27.4	26.7	26.0	25.4	24.8	24.2	800
900	146.0	122.7	106.1	93.6	84.0	76.2	69.9	64.6	60.1	56.3	52.9	50.0	47.5	45.2	43.2	41.3	39.7	38.1	36.8	35.5	34.3	33.3	32.3	31.4	30.5	29.7	28.9	28.2	27.6	27.0	900
1000	160.4	134.8	116.6	102.9	92.3	83.8	76.8	71.0	66.1	61.9	58.2	55.0	52.2	49.7	47.5	45.5	43.6	42.0	40.5	39.1	37.8	36.6	35.5	34.5	33.6	32.7	31.9	31.1	30.4	29.7	1000
1100	174.8	147.0	127.1	112.2	100.6	91.3	83.7	77.4	72.1	67.5	63.5	60.0	57.0	54.2	51.8	49.6	47.6	45.8	44.2	42.6	41.2	40.0	38.8	37.7	36.6	35.7	34.8	33.9	33.2	32.4	1100
1200	189.2	159.1	137.6	121.5	108.9	98.9	90.7	83.8	78.0	73.1	68.8	65.0	61.7	58.7	56.1	53.7	51.6	49.6	47.8	46.2	44.7	43.3	42.0	40.8	39.7	38.7	37.7	36.8	35.9	35.1	1200
1300	203.6	171.2	148.1	130.7	117.2	106.5	97.6	90.3	84.0	78.7	74.1	70.0	66.4	63.3	60.4	57.9	55.6	53.5	51.5	49.8	48.2	46.7	45.3	44.0	42.8	41.7	40.6	39.7	38.7	37.9	1300
1400	218.0	183.3	158.6	140.0	125.6	114.0	104.6	96.7	90.0	84.3	79.3	75.0	71.2	67.8	64.7	62.0	59.5	57.3	55.2	53.3	51.6	50.0	48.5	47.2	45.9	44.7	43.6	42.5	41.5	40.6	1400
1500	232.4	195.5	169.1	149.3	133.9	121.6	111.5	103.1	96.0	89.9	84.6	80.0	75.9	72.3	69.1	66.2	63.5	61.1	58.9	56.9	55.1	53.4	51.8	50.3	49.0	47.7	46.5	45.4	44.3	43.3	1500
Term. 2/	16.262	13.552	11.616	10.164	9.034	8.131	7.392	6.776	6.255	5.808	5.421	5.082	4.783	4.517	4.279	4.066	3.872	3.696	3.535	3.388	3.252	3.127	3.011	2.904	2.804	2.710	2.623	2.541	2.464	2.391	Term. 2/
L. H. 3/	.144110	.121283	.104979	.092750	.083239	.075630	.069405	.064217	.059827	.056064	.052803	.049940	.047432	.045194	.043192	.041390	.039760	.038277	.036924	.035683	.034542	.033488	.032513	.031607	.030764	.029977	.029240	.028550	.027902	.027291	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.982. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 18 (Concluded).—TERRITORY NO. 3 - EASTERN, excluding New England but including Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20	2.9	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.6	2.5	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50	3.7	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
120	5.5	5.4	5.3	5.2	5.1	4.9	4.8	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
140	6.1	5.9	5.8	5.7	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.6	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
160	6.6	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
180	7.1	7.0	6.8	6.7	6.5	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
200	7.7	7.5	7.3	7.2	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
220	8.2	8.0	7.8	7.7	7.5	7.4	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
240	8.7	8.5	8.4	8.2	8.0	7.9	7.7	7.6	7.4	7.3	7.2	7.1	6.9	6.8	6.7	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
260	9.3	9.1	8.9	8.7	8.5	8.3	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
280	9.8	9.6	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.2	8.1	7.9	7.8	7.7	7.6	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
300	10.3	10.1	9.9	9.7	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
320	10.9	10.6	10.4	10.2	10.0	9.8	9.6	9.4	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
340	11.4	11.2	10.9	10.7	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.8	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
360	11.9	11.7	11.4	11.2	11.0	10.8	10.6	10.4	10.2	10.0	9.9	9.7	9.5	9.4	9.3	9.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
380	12.5	12.2	11.9	11.7	11.5	11.3	11.0	10.8	10.7	10.5	10.3	10.1	10.0	9.8	9.7	9.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
400	13.0	12.7	12.5	12.2	12.0	11.7	11.5	11.3	11.1	10.9	10.8	10.6	10.4	10.3	10.1	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
420	13.5	13.3	13.0	12.7	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.5	10.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
440	14.1	13.8	13.5	13.2	13.0	12.7	12.5	12.3	12.0	11.8	11.6	11.5	11.3	11.1	11.0	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
460	14.6	14.3	14.0	13.7	13.5	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.4	11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
480	15.1	14.8	14.6	14.2	13.9	13.7	13.4	13.2	13.0	12.8	12.5	12.3	12.2	12.0	11.8	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
500	15.7	15.3	15.0	14.7	14.4	14.2	13.9	13.7	13.4	13.2	13.0	12.8	12.6	12.4	12.2	12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
600	[illegible]	18.0	17.6	17.2	16.9	16.6	16.3	16.0	15.7	15.5	15.2	15.0	14.8	14.5	14.3	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
700	[illegible]	20.9	20.5	19.9	19.4	19.0	18.7	18.4	18.0	17.7	17.5	17.2	16.9	16.7	16.4	16.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
800	23.7	23.2	22.7	22.3	21.9	21.4	21.1	20.7	20.4	20.0	19.7	19.4	19.1	18.8	18.6	18.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
900	26.4	25.8	25.3	24.8	24.3	23.9	23.4	23.0	22.7	22.3	21.9	21.6	21.3	21.0	20.7	20.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
1000	29.0	28.4	27.9	27.3	26.8	26.3	25.8	25.4	25.0	24.6	24.2	23.8	23.5	23.1	22.8	22.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
1100	31.7	31.0	30.4	29.8	29.3	28.7	28.2	27.7	27.3	26.8	26.4	26.0	25.6	25.3	24.9	24.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
1200	34.4	33.7	33.0	32.3	31.7	31.2	30.6	30.1	29.6	29.1	28.6	28.2	27.8	27.4	27.0	26.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1300	37.1	36.3	35.6	34.9	34.2	33.6	33.0	32.4	31.9	31.4	30.9	30.4	30.0	29.5	29.1	28.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
1400	39.7	38.9	38.1	37.4	36.7	36.0	35.4	34.8	34.2	33.6	33.1	32.6	32.1	31.7	31.2	30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1500	42.4	41.6	40.7	39.9	39.1	38.4	37.8	37.1	36.5	35.9	35.4	34.8	34.3	33.8	33.3	32.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
Term. 2/	2.323	2.289	2.258	2.230	2.205	2.183	2.163	2.146	2.131	2.118	2.107	2.098	2.090	2.083	2.078	2.074	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.026716	.026172	.025653	.025171	.024719	.024290	.023882	.023495	.023126	.022774	.022438	.022117	.021810	.021517	.021236	.020966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.932. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 3 - Eastern, excl. N. E. but incl. No. Ill.

STOCK CARS

TABLE 19.—TERRITORY NO. 3 - EASTERN, excluding New England but including Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.7	17.3	14.8	13.0	11.5	10.4	9.4	8.7	8.0	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.8	3.6	3.5	-	-	-	-	10
20	22.1	18.4	15.8	13.9	12.3	11.1	10.1	9.3	8.6	8.0	7.5	7.0	6.6	6.2	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	-	-	-	-	20
30	23.4	19.6	16.8	14.7	13.1	11.8	10.8	9.9	9.2	8.5	8.0	7.5	7.0	6.7	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	-	-	-	-	30
40	24.8	20.7	17.8	15.6	13.9	12.6	11.4	10.5	9.7	9.0	8.5	8.0	7.5	7.1	6.7	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	-	-	-	-	40
50	26.2	21.9	18.8	16.5	14.7	13.3	12.1	11.1	10.3	9.6	9.0	8.4	8.0	7.5	7.2	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.1	5.0	4.8	4.7	-	-	-	-	50
60	27.6	23.0	19.8	17.4	15.5	14.0	12.8	11.7	10.9	10.1	9.5	8.9	8.4	8.0	7.6	7.2	6.9	6.6	6.3	6.1	5.9	5.6	5.5	5.3	5.1	5.0	-	-	-	-	60
70	28.9	24.2	20.8	18.3	16.3	14.7	13.4	12.4	11.4	10.7	10.0	9.4	8.9	8.4	8.0	7.6	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	-	-	-	-	70
80	30.3	25.4	21.8	19.2	17.1	15.4	14.1	13.0	12.0	11.2	10.5	9.9	9.3	8.8	8.4	8.0	7.7	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.5	-	-	-	-	80
90	31.7	26.5	22.8	20.1	17.9	16.2	14.8	13.6	12.6	11.7	11.0	10.3	9.8	9.3	8.8	8.4	8.0	7.7	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.8	-	-	-	-	90
100	33.1	27.7	23.8	20.9	18.7	16.9	15.4	14.2	13.2	12.3	11.5	10.8	10.2	9.7	9.2	8.8	8.4	8.1	7.7	7.5	7.2	6.9	6.7	6.5	6.3	6.1	-	-	-	-	100
120	35.8	30.0	25.8	22.7	20.3	18.3	16.8	15.4	14.3	13.3	12.5	11.8	11.1	10.6	10.1	9.6	9.2	8.8	8.5	8.1	7.9	7.6	7.3	7.1	6.9	6.7	-	-	-	-	120
140	38.6	32.3	27.8	24.5	21.9	19.8	18.1	16.7	15.5	14.4	13.5	12.7	12.1	11.4	10.9	10.4	9.9	9.5	9.2	8.8	8.5	8.2	8.0	7.7	7.5	7.3	-	-	-	-	140
160	41.3	34.6	29.8	26.3	23.5	21.2	19.4	17.9	16.6	15.5	14.5	13.7	13.0	12.3	11.7	11.2	10.7	10.3	9.9	9.5	9.2	8.9	8.6	8.3	8.1	7.8	-	-	-	-	160
180	44.1	36.9	31.8	28.0	25.1	22.7	20.7	19.1	17.7	16.6	15.5	14.7	13.9	13.2	12.5	12.0	11.5	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.7	8.4	-	-	-	-	180
200	46.8	39.3	33.9	29.8	26.6	24.1	22.1	20.3	18.9	17.6	16.6	15.6	14.8	14.0	13.4	12.8	12.2	11.7	11.3	10.9	10.5	10.2	9.8	9.5	9.3	9.0	-	-	-	-	200
220	49.6	41.6	35.9	31.6	28.2	25.6	23.4	21.6	20.0	18.7	17.6	16.6	15.7	14.9	14.2	13.6	13.0	12.5	12.0	11.6	11.2	10.8	10.5	10.1	9.8	9.6	-	-	-	-	220
240	52.3	43.9	37.9	33.3	29.8	27.0	24.7	22.8	21.2	19.8	18.6	17.5	16.6	15.8	15.0	14.4	13.8	13.2	12.7	12.3	11.8	11.4	11.1	10.8	10.4	10.1	-	-	-	-	240
260	55.1	46.2	39.9	35.1	31.4	28.5	26.0	24.0	22.3	20.9	19.6	18.5	17.5	16.6	15.9	15.2	14.5	14.0	13.4	12.9	12.5	12.1	11.7	11.4	11.0	10.7	-	-	-	-	260
280	57.8	48.5	41.9	36.9	33.0	29.9	27.4	25.3	23.5	21.9	20.6	19.4	18.4	17.5	16.7	16.0	15.3	14.7	14.1	13.6	13.2	12.7	12.3	12.0	11.6	11.3	-	-	-	-	280
300	60.6	50.8	43.9	38.7	34.6	31.4	28.7	26.5	24.6	23.0	21.6	20.4	19.3	18.4	17.5	16.8	16.1	15.4	14.8	14.3	13.8	13.4	13.0	12.6	12.2	11.9	-	-	-	-	300
320	63.3	53.1	45.9	40.4	36.2	32.8	30.0	27.7	25.8	24.1	22.6	21.4	20.2	19.2	18.3	17.5	16.8	16.2	15.6	15.0	14.5	14.0	13.6	13.2	12.8	12.5	-	-	-	-	320
340	66.1	55.5	47.9	42.2	37.8	34.2	31.4	28.9	26.9	25.2	23.6	22.3	21.1	20.1	19.2	18.3	17.6	16.9	16.3	15.7	15.2	14.7	14.2	13.8	13.4	13.0	-	-	-	-	340
360	68.8	57.8	49.9	44.0	39.4	35.7	32.7	30.2	28.1	26.2	24.7	23.3	22.1	21.0	20.0	19.1	18.3	17.6	17.0	16.4	15.8	15.3	14.8	14.4	14.0	13.6	-	-	-	-	360
380	71.6	60.1	51.9	45.7	41.0	37.1	34.0	31.4	29.2	27.3	25.7	24.2	23.0	21.8	20.8	19.9	19.1	18.4	17.7	17.1	16.5	16.0	15.5	15.0	14.6	14.2	-	-	-	-	380
400	74.3	62.4	53.9	47.5	42.6	38.6	35.3	32.6	30.3	28.4	26.7	25.2	23.9	22.7	21.7	20.7	19.9	19.1	18.4	17.7	17.2	16.6	16.1	15.6	15.2	14.8	-	-	-	-	400
420	77.1	64.7	55.9	49.3	44.1	40.0	36.7	33.9	31.5	29.5	27.7	26.1	24.8	23.6	22.5	21.5	20.6	19.8	19.1	18.4	17.8	17.2	16.7	16.2	15.8	15.3	-	-	-	-	420
440	79.8	67.0	57.9	51.1	45.7	41.5	38.0	35.1	32.6	30.5	28.7	27.1	25.7	24.4	23.3	22.3	21.4	20.6	19.8	19.1	18.5	17.9	17.3	16.8	16.4	15.9	-	-	-	-	440
460	82.6	69.3	59.9	52.8	47.3	42.9	39.2	36.3	33.8	31.6	29.7	28.1	26.6	25.3	24.1	23.1	22.2	21.3	20.5	19.8	19.1	18.5	18.0	17.4	17.0	16.5	-	-	-	-	460
480	85.3	71.7	61.9	54.6	48.9	44.4	40.6	37.5	34.9	32.7	30.7	29.0	27.5	26.2	25.0	23.9	22.9	22.0	21.2	20.5	19.8	19.2	18.6	18.1	17.5	17.1	-	-	-	-	480
500	88.1	74.0	63.9	56.4	50.5	45.8	42.0	38.8	36.1	33.7	31.7	30.0	28.4	27.0	25.8	24.7	23.7	22.8	21.9	21.2	20.5	19.8	19.2	18.7	18.1	17.7	-	-	-	-	500
600	101.8	85.6	73.9	65.2	58.5	53.0	48.6	44.9	41.8	39.1	36.8	34.8	33.0	31.4	30.0	28.7	27.5	26.5	25.5	24.6	23.8	23.0	22.3	21.7	21.1	20.5	-	-	-	-	600
700	115.6	97.1	84.0	74.1	66.4	60.3	55.3	51.1	47.5	44.5	41.9	40.0	37.5	35.7	34.1	32.6	31.3	30.1	29.0	28.0	27.1	26.3	25.5	24.7	24.1	23.4	-	-	-	-	700
800	129.3	108.7	94.0	83.0	74.4	67.5	61.9	57.2	53.3	49.9	46.9	44.3	42.1	40.0	38.2	36.6	35.1	33.8	32.6	31.5	30.4	29.5	28.6	27.8	27.0	26.3	-	-	-	-	800
900	143.0	120.3	104.0	91.8	82.3	74.7	68.5	63.4	59.0	55.2	52.0	49.1	46.6	44.4	42.4	40.6	39.0	37.5	36.1	34.9	33.8	32.7	31.7	30.8	30.0	29.2	-	-	-	-	900
1000	156.8	131.9	114.0	100.7	90.3	82.0	75.2	69.5	64.7	60.6	57.0	53.9	51.2	48.7	46.5	44.6	42.8	41.2	39.7	38.3	37.1	35.9	34.9	33.9	33.0	32.1	-	-	-	-	1000
1100	170.5	143.4	124.1	109.5	98.2	89.2	81.8	75.6	70.4	66.0	62.1	58.7	55.7	53.1	50.7	48.5	46.6	44.8	43.2	41.8	40.4	39.1	38.0	36.9	35.9	35.0	-	-	-	-	1100
1200	184.3	155.0	134.1	118.4	106.2	96.4	88.4	81.8	76.2	71.3	67.1	63.5	60.3	57.4	54.8	52.5	50.4	48.5	46.8	45.2	43.7	42.4	41.1	40.0	38.9	37.9	-	-	-	-	1200
1300	198.0	166.6	144.1	127.3	114.2	103.7	95.1	87.9	81.9	76.7	72.2	68.3	64.8	61.7	59.0	56.5	54.2	52.2	50.3	48.6	47.0	45.6	44.2	43.0	41.8	40.8	-	-	-	-	1300
1400	211.8	178.2	154.1	136.1	122.1	110.9	101.7	94.1	87.6	82.1	77.3	73.1	69.4	66.1	63.1	60.5	58.1	55.9	53.9	52.0	50.4	48.8	47.4	46.0	44.8	43.6	-	-	-	-	1400
1500	225.5	189.7	164.2	145.0	130.1	118.1	108.4	100.2	93.3	87.4	82.3	77.9	73.9	70.4	67.3	64.4	61.9	59.5	57.4	55.5	53.7	52.0	50.5	49.1	47.8	46.5	-	-	-	-	1500
Term. 2/	19.324	16.103	13.803	12.078	10.736	9.662	8.784	8.052	7.432	6.901	6.441	6.039	5.684	5.368	5.085	4.831	4.601	4.392	4.201	4.026	3.865	3.716	3.579	3.451	3.332	3.221	-	-	-	-	Term. 2/
L. H. 3/	.137470	.115750	.100236	.088600	.079550	.072310	.066386	.061450	.057273	.053693	.050590	.047875	.045479	.043350	.041445	.039730	.038179	.036768	.035480	.034300	.033214	.032212	.031283	.030421	.029619	.028870	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 20.9 tons and a ratio of empty car miles to loaded car miles of 1.006. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 20.—TERRITORY NO. 3 - EASTERN, excluding New England but including Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.9	14.9	12.8	11.2	10.0	9.0	8.2	7.5	6.9	6.4	6.0	5.6	5.3	5.0	4.8	4.5	4.3	4.1	3.9	3.8	3.6	3.5	3.4	3.2	3.1	3.0	-	-	-	-	10
20	19.6	16.2	13.9	12.2	10.9	9.8	8.9	8.2	7.6	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.2	4.0	3.9	3.7	3.6	3.5	3.4	-	-	-	-	20
30	21.1	17.6	15.1	13.2	11.8	10.6	9.7	8.9	8.2	7.7	7.2	6.7	6.3	6.0	5.7	5.4	5.2	5.0	4.7	4.6	4.4	4.2	4.1	3.9	3.8	3.7	-	-	-	-	30
40	22.7	18.9	16.3	14.3	12.7	11.5	10.5	9.6	8.9	8.3	7.7	7.3	6.9	6.5	6.2	5.9	5.6	5.4	5.1	4.9	4.8	4.6	4.4	4.3	4.1	4.0	-	-	-	-	40
50	24.2	20.3	17.4	15.3	13.6	12.3	11.2	10.3	9.5	8.9	8.3	7.8	7.4	7.0	6.6	6.3	6.0	5.8	5.6	5.3	5.1	5.0	4.8	4.6	4.5	4.3	-	-	-	-	50
60	25.8	21.6	18.6	16.3	14.5	13.1	12.0	11.0	10.2	9.5	8.9	8.4	7.9	7.5	7.1	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.1	5.0	4.8	4.7	-	-	-	-	60
70	27.4	23.0	19.7	17.3	15.5	14.0	12.7	11.7	10.9	10.1	9.5	8.9	8.4	8.0	7.6	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	-	-	-	-	70
80	29.0	24.3	20.9	18.4	16.4	14.8	13.5	12.4	11.5	10.7	10.1	9.5	8.9	8.5	8.1	7.7	7.4	7.0	6.8	6.5	6.3	6.0	5.8	5.7	5.5	5.3	-	-	-	-	80
90	30.6	25.6	22.1	19.4	17.3	15.6	14.3	13.1	12.2	11.4	10.6	10.0	9.5	9.0	8.5	8.1	7.8	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	-	-	-	-	90
100	32.2	27.0	23.2	20.4	18.2	16.5	15.0	13.8	12.8	12.0	11.2	10.6	10.0	9.5	9.0	8.6	8.2	7.9	7.6	7.3	7.0	6.8	6.6	6.3	6.1	6.0	-	-	-	-	100
120	35.4	29.7	25.6	22.5	20.1	18.1	16.6	15.3	14.2	13.2	12.4	11.7	11.0	10.5	10.0	9.5	9.1	8.7	8.4	8.1	7.8	7.5	7.3	7.0	6.8	6.6	-	-	-	-	120
140	38.6	32.4	27.9	24.5	21.9	19.8	18.1	16.7	15.5	14.4	13.5	12.8	12.1	11.5	10.9	10.4	10.0	9.6	9.2	8.8	8.5	8.2	8.0	7.7	7.5	7.3	-	-	-	-	140
160	41.8	35.0	30.2	26.6	23.7	21.5	19.6	18.1	16.8	15.7	14.7	13.9	13.1	12.4	11.8	11.3	10.8	10.4	10.0	9.6	9.3	9.0	8.7	8.4	8.2	7.9	-	-	-	-	160
180	45.0	37.7	32.5	28.6	25.6	23.2	21.2	19.5	18.1	16.9	15.9	15.0	14.1	13.4	12.8	12.2	11.7	11.2	10.8	10.4	10.0	9.7	9.4	9.1	8.8	8.6	-	-	-	-	180
200	48.2	40.4	34.8	30.7	27.4	24.8	22.7	20.9	19.4	18.1	17.0	16.0	15.2	14.4	13.7	13.1	12.6	12.1	11.6	11.2	10.8	10.4	10.1	9.8	9.5	9.2	-	-	-	-	200
220	51.4	43.1	37.2	32.7	29.3	26.5	24.2	22.3	20.7	19.4	18.2	17.1	16.2	15.4	14.7	14.0	13.4	12.9	12.4	12.0	11.5	11.2	10.8	10.5	10.2	9.9	-	-	-	-	220
240	54.6	45.8	39.5	34.8	31.1	28.2	25.8	23.8	22.1	20.6	19.3	18.2	17.3	16.4	15.6	14.9	14.3	13.7	13.2	12.7	12.3	11.9	11.5	11.2	10.8	10.5	-	-	-	-	240
260	57.8	48.5	41.8	36.8	32.9	29.8	27.3	25.2	23.4	21.8	20.5	19.3	18.3	17.4	16.6	15.8	15.2	14.6	14.0	13.5	13.0	12.6	12.2	11.8	11.5	11.2	-	-	-	-	260
280	61.0	51.2	44.1	38.9	34.8	31.5	28.8	26.6	24.7	23.1	21.7	20.4	19.4	18.4	17.5	16.7	16.0	15.4	14.8	14.3	13.8	13.3	12.9	12.5	12.2	11.8	-	-	-	-	280
300	64.2	53.8	46.5	40.9	36.6	33.2	30.3	28.0	26.0	24.3	22.8	21.5	20.4	19.4	18.5	17.7	16.9	16.2	15.6	15.1	14.6	14.1	13.6	13.2	12.8	12.5	-	-	-	-	300
320	67.4	56.5	48.8	43.0	38.4	34.8	31.9	29.4	27.3	25.5	24.0	22.6	21.4	20.4	19.4	18.6	17.8	17.1	16.4	15.8	15.3	14.8	14.3	13.9	13.5	13.1	-	-	-	-	320
340	70.6	59.2	51.1	45.0	40.3	36.5	33.4	30.8	28.6	26.8	25.1	23.7	22.5	21.4	20.4	19.5	18.7	17.9	17.2	16.6	16.1	15.5	15.0	14.6	14.2	13.8	-	-	-	-	340
360	73.8	61.9	53.4	47.1	42.1	38.2	34.9	32.2	30.0	28.0	26.3	24.8	23.5	22.3	21.3	20.4	19.5	18.8	18.1	17.4	16.8	16.3	15.8	15.3	14.8	14.4	-	-	-	-	360
380	77.0	64.6	55.7	49.1	44.0	39.8	36.6	33.7	31.4	29.2	27.5	25.9	24.6	23.3	22.3	21.3	20.4	19.6	18.9	18.2	17.6	17.0	16.5	16.0	15.5	15.1	-	-	-	-	380
400	80.2	67.3	58.1	51.3	45.8	41.5	38.0	35.1	32.6	30.5	28.6	27.0	25.6	24.3	23.2	22.2	21.3	20.4	19.7	19.0	18.3	17.7	17.2	16.7	16.2	15.7	-	-	-	-	400
420	83.3	70.0	60.4	53.2	47.6	43.2	39.5	36.5	33.9	31.7	29.8	28.1	26.6	25.3	24.1	23.1	22.1	21.3	20.5	19.7	19.1	18.5	17.9	17.4	16.9	16.4	-	-	-	-	420
440	86.5	72.6	62.7	55.3	49.5	44.8	41.1	37.9	35.2	32.9	30.9	29.2	27.7	26.3	25.1	24.0	23.0	22.1	21.3	20.5	19.8	19.2	18.6	18.0	17.5	17.0	-	-	-	-	440
460	89.7	75.3	65.0	57.3	51.3	46.5	42.6	39.3	36.5	34.2	32.1	30.3	28.7	27.3	26.0	24.9	23.9	22.9	22.1	21.3	20.6	19.9	19.3	18.7	18.2	17.7	-	-	-	-	460
480	92.9	78.0	67.4	59.4	53.2	48.2	44.1	40.7	37.9	35.4	33.3	31.4	29.8	28.3	27.0	25.8	24.7	23.8	22.9	22.1	21.3	20.6	20.0	19.4	18.9	18.3	-	-	-	-	480
500	96.1	80.7	69.7	61.4	55.0	49.9	45.6	42.1	39.2	36.6	34.4	32.5	30.8	29.3	27.9	26.7	25.6	24.6	23.7	22.9	22.1	21.4	20.7	20.1	19.5	19.0	-	-	-	-	500
600	112.1	94.1	81.3	71.7	64.2	58.2	53.3	49.2	45.8	42.8	40.2	38.0	36.0	34.2	32.7	31.2	30.0	28.8	27.7	26.8	25.9	25.0	24.3	23.5	22.9	22.3	-	-	-	-	600
700	128.1	107.6	92.9	81.9	73.4	66.5	60.9	56.3	52.3	49.0	46.0	43.5	41.2	39.2	37.4	35.8	34.3	33.0	31.8	30.6	29.6	28.7	27.8	27.0	26.2	25.5	-	-	-	-	700
800	144.0	121.0	104.5	92.2	82.6	74.9	68.6	63.4	58.9	55.1	51.8	48.9	46.4	44.1	42.1	40.3	38.7	37.2	35.8	34.5	33.4	32.3	31.3	30.4	29.6	28.8	-	-	-	-	800
900	160.0	134.4	116.1	102.4	91.8	83.2	76.2	70.4	65.5	61.3	57.6	54.4	51.6	49.1	46.9	44.8	43.0	41.3	39.8	38.4	37.2	36.0	34.9	33.9	32.9	32.0	-	-	-	-	900
1000	176.0	147.9	127.8	112.7	101.0	91.6	83.9	77.5	72.1	67.5	63.4	59.9	56.8	54.1	51.6	49.4	47.4	45.5	43.9	42.3	40.9	39.6	38.4	37.3	36.3	35.3	-	-	-	-	1000
1100	192.0	161.3	139.4	122.9	110.1	99.9	91.5	84.6	78.7	73.6	69.2	65.4	62.0	59.0	56.3	53.9	51.7	49.7	47.9	46.2	44.7	43.3	42.0	40.7	39.6	38.5	-	-	-	-	1100
1200	207.9	174.7	151.0	133.2	119.3	108.3	99.0	91.6	85.3	79.8	75.0	70.9	67.2	64.0	61.0	58.4	56.0	53.9	51.9	50.1	48.5	46.9	45.5	44.2	43.0	41.8	-	-	-	-	1200
1300	223.9	188.1	162.6	143.4	128.5	116.6	106.8	98.7	91.8	85.9	80.8	76.4	72.4	68.9	65.8	62.9	60.4	58.1	56.0	54.0	52.2	50.6	49.0	47.6	46.3	45.1	-	-	-	-	1300
1400	239.9	201.6	174.2	153.7	137.7	124.9	114.5	105.8	98.4	92.1	86.6	81.8	77.6	73.9	70.5	67.5	64.7	62.3	60.0	57.9	56.0	54.2	52.6	51.1	49.6	48.3	-	-	-	-	1400
1500	255.9	215.0	185.8	163.9	146.9	133.3	122.1	112.9	105.0	98.3	92.4	87.3	82.8	78.8	75.2	72.0	69.1	66.4	64.0	61.8	59.8	57.9	56.1	54.5	53.0	51.6	-	-	-	-	1500
Term. 2/	16.262	13.552	11.616	10.164	9.034	8.131	7.392	6.776	6.255	5.808	5.421	5.082	4.783	4.517	4.279	4.066	3.872	3.696	3.535	3.388	3.252	3.127	3.011	2.904	2.804	2.710	-	-	-	-	Term. 2/
L. H. 3/	.159730	.134300	.116136	.102513	.091917	.083440	.076505	.070725	.065835	.061643	.058010	.054831	.052026	.049533	.047303	.045295	.043479	.041827	.040320	.038938	.037666	.036492	.035406	.034396	.033457	.032580	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.869. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 3 - Eastern, excl. N. E. but incl. No. Ill.

LESS-CARLOAD

TABLE 21.—TERRITORY NO. 3 - EASTERN, excluding New England but including Northern Illinois

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	88.4	68.0	57.8	51.7	47.7	44.8	42.6	40.9	39.5	38.4	37.5	36.7	36.0	35.4	34.9	34.5	34.1	33.7	33.4	33.1	32.9	32.6	32.4	32.2	32.0	31.8	31.7	31.5	31.4	10
20	93.9	71.8	60.7	54.1	49.6	46.5	44.1	42.3	40.8	39.6	38.6	37.7	37.0	36.3	35.8	35.3	34.9	34.5	34.1	33.8	33.5	33.3	33.0	32.8	32.6	32.4	32.2	32.1	31.9	20
30	99.4	75.5	63.6	56.4	51.6	48.2	45.6	43.6	42.0	40.7	39.6	38.7	37.9	37.2	36.6	36.1	35.7	35.2	34.9	34.5	34.2	33.9	33.7	33.4	33.2	33.0	32.8	32.6	32.5	30
40	105.0	79.3	66.4	58.7	53.6	49.9	47.1	45.0	43.3	41.9	40.7	39.7	38.9	38.1	37.5	36.9	36.4	36.0	35.6	35.2	34.9	34.6	34.3	34.0	33.8	33.6	33.4	33.2	33.0	40
50	110.5	83.0	69.3	61.0	55.5	51.6	48.7	46.4	44.5	43.0	41.8	40.7	39.8	39.0	38.4	37.8	37.2	36.7	36.3	35.9	35.6	35.2	34.9	34.7	34.4	34.2	33.9	33.7	33.5	50
60	116.0	86.8	72.1	63.4	57.5	53.3	50.2	47.8	45.8	44.2	42.9	41.8	40.8	39.9	39.2	38.6	38.0	37.5	37.0	36.6	36.2	35.9	35.6	35.3	35.0	34.7	34.5	34.3	34.1	60
70	121.5	90.5	75.0	65.7	59.5	55.0	51.7	49.1	47.1	45.4	44.0	42.8	41.7	40.8	40.1	39.4	38.8	38.2	37.7	37.3	36.9	36.5	36.2	35.9	35.6	35.3	35.1	34.9	34.6	70
80	127.1	94.3	77.8	68.0	61.4	56.8	53.2	50.5	48.3	46.5	45.0	43.8	42.7	41.8	40.9	40.2	39.6	39.0	38.5	38.0	37.6	37.2	36.8	36.5	36.2	35.9	35.7	35.4	35.2	80
90	132.6	98.0	80.7	70.3	63.4	58.5	54.8	51.9	49.6	47.7	46.1	44.8	43.6	42.7	41.8	41.0	40.3	39.7	39.2	38.7	38.2	37.8	37.5	37.1	36.8	36.5	36.2	36.0	35.7	90
100	138.1	101.8	83.6	72.7	65.4	60.2	56.3	53.3	50.8	48.8	47.2	45.8	44.6	43.6	42.6	41.8	41.1	40.5	39.9	39.4	38.9	38.5	38.1	37.7	37.4	37.1	36.8	36.5	36.3	100
120	149.2	109.2	89.3	77.3	69.3	63.6	59.3	56.0	53.3	51.2	49.3	47.8	46.5	45.4	44.4	43.5	42.7	42.0	41.4	40.8	40.3	39.8	39.4	39.0	38.6	38.3	37.9	37.6	37.4	120
140	160.2	116.7	95.0	81.9	73.2	67.0	62.4	58.8	55.8	53.5	51.5	49.8	48.4	47.2	46.1	45.1	44.3	43.5	42.8	42.2	41.6	41.1	40.6	40.2	39.8	39.4	39.1	38.8	38.5	140
160	171.3	124.2	100.7	86.6	77.2	70.5	65.4	61.5	58.4	55.8	53.7	51.9	50.3	49.0	47.8	46.7	45.8	45.0	44.2	43.6	43.0	42.4	41.9	41.4	41.0	40.6	40.2	39.9	39.5	160
180	182.3	131.7	106.4	91.2	81.1	73.9	68.5	64.3	60.9	58.1	55.8	53.9	52.2	50.8	49.5	48.4	47.4	46.5	45.7	45.0	44.3	43.7	43.2	42.7	42.2	41.8	41.4	41.0	40.6	180
200	193.4	139.2	112.1	95.9	85.1	77.3	71.5	67.0	63.4	60.4	58.0	55.9	54.1	52.6	51.2	50.0	48.9	48.0	47.1	46.4	45.7	45.0	44.4	43.9	43.4	42.9	42.5	42.1	41.7	200
220	204.4	146.7	117.8	100.5	89.0	80.7	74.6	69.8	65.9	62.8	60.1	57.9	56.0	54.4	52.9	51.6	50.5	49.5	48.6	47.8	47.0	46.3	45.7	45.1	44.6	44.1	43.6	43.2	42.8	220
240	215.5	154.2	123.6	105.2	92.9	84.2	77.6	72.5	68.4	65.1	62.3	59.9	57.9	56.2	54.6	53.3	52.1	51.0	50.0	49.2	48.4	47.6	47.0	46.4	45.8	45.3	44.8	44.3	43.9	240
260	226.5	161.7	129.3	109.8	96.9	87.6	80.7	75.3	70.9	67.4	64.4	62.0	59.8	58.0	56.3	54.9	53.6	52.5	51.5	50.6	49.7	48.9	48.2	47.6	47.0	46.4	45.9	45.4	45.0	260
280	237.6	169.2	135.0	114.5	100.8	91.0	83.7	78.0	73.4	69.7	66.6	64.0	61.7	59.8	58.1	56.5	55.2	54.0	52.9	51.9	51.1	50.2	49.5	48.8	48.2	47.6	47.1	46.6	46.1	280
300	248.6	176.7	140.7	119.1	104.7	94.5	86.7	80.8	76.0	72.0	68.8	66.0	63.6	61.6	59.8	58.2	56.8	55.5	54.4	53.3	52.4	51.6	50.8	50.1	49.4	48.8	48.2	47.7	47.2	300
320	259.7	184.2	146.4	123.8	108.7	97.9	89.8	83.5	78.5	74.4	70.9	68.0	65.5	63.4	61.5	59.8	58.3	57.0	55.8	54.7	53.8	52.9	52.0	51.3	50.6	49.9	49.3	48.8	48.3	320
340	270.7	191.7	152.1	128.4	112.6	101.3	92.8	86.3	81.0	76.7	73.1	70.0	67.4	65.2	63.2	61.4	59.9	58.5	57.3	56.1	55.1	54.2	53.3	52.5	51.8	51.1	50.5	49.9	49.4	340
360	281.8	199.2	157.8	133.1	116.5	104.7	95.9	89.0	83.5	79.0	75.2	72.1	69.3	67.0	64.9	63.1	61.5	60.0	58.7	57.5	56.5	55.5	54.6	53.7	53.0	52.3	51.6	51.0	50.4	360
380	292.8	206.7	163.6	137.7	120.5	108.2	98.9	91.8	86.0	81.3	77.4	74.1	71.2	68.8	66.6	64.7	63.0	61.5	60.2	58.9	57.8	56.8	55.8	55.0	54.2	53.5	52.8	52.1	51.5	380
400	303.9	214.2	169.3	142.4	124.4	111.6	102.0	94.5	88.5	83.6	79.5	76.1	73.1	70.6	68.3	66.4	64.6	63.0	61.6	60.3	59.2	58.1	57.1	56.2	55.4	54.6	53.9	53.2	52.6	400
420	314.9	221.6	175.0	147.0	128.3	115.0	105.0	97.3	91.0	85.9	81.7	78.1	75.0	72.4	70.0	68.0	66.2	64.5	63.0	61.7	60.5	59.4	58.4	57.4	56.6	55.8	55.0	54.4	53.7	420
440	326.0	229.1	180.7	151.7	132.3	118.4	108.1	100.0	93.5	88.3	83.9	80.1	76.9	74.2	71.8	69.6	67.7	66.0	64.5	63.1	61.8	60.7	59.6	58.7	57.8	57.0	56.2	55.5	54.8	440
460	337.0	236.6	186.4	156.3	136.2	121.9	111.1	102.8	96.1	90.6	86.0	82.2	78.8	76.0	73.5	71.3	69.3	67.5	65.9	64.5	63.2	62.0	60.9	59.9	59.0	58.1	57.3	56.6	55.9	460
480	348.1	244.1	192.1	161.0	140.2	125.3	114.2	105.5	98.6	92.9	88.2	84.2	80.7	77.8	75.2	72.9	70.8	69.0	67.4	65.9	64.5	63.3	62.2	61.1	60.2	59.3	58.5	57.7	57.0	480
500	359.1	251.6	197.9	165.6	144.1	128.7	117.2	108.3	101.1	95.2	90.3	86.2	82.7	79.6	76.9	74.5	72.4	70.5	68.8	67.3	65.9	64.6	63.5	62.4	61.4	60.5	59.6	58.8	58.1	500
600	414.4	289.1	226.4	188.8	163.8	145.9	132.4	122.0	113.6	106.8	101.1	96.3	92.2	88.6	85.5	82.7	80.2	78.0	76.1	74.3	72.6	71.2	69.8	68.5	67.4	66.3	65.3	64.4	63.5	600
700	469.6	326.6	255.0	212.1	183.4	163.0	147.7	135.8	126.2	118.4	111.9	106.4	101.7	97.6	94.0	90.9	88.1	85.5	83.3	81.2	79.4	77.7	76.1	74.7	73.4	72.2	71.0	70.0	69.0	700
800	524.9	364.0	283.6	235.3	203.1	180.1	162.9	149.5	138.8	130.0	122.7	116.5	111.2	106.6	102.6	99.0	95.9	93.1	90.5	88.2	86.1	84.2	82.5	80.9	79.4	78.0	76.7	75.5	74.4	800
900	580.1	401.5	312.1	258.5	222.8	197.3	178.1	163.3	151.3	141.6	133.5	125.6	120.7	115.6	111.1	107.2	103.7	100.6	97.7	95.2	92.9	90.7	88.8	87.0	85.4	83.8	82.4	81.1	79.9	900
1000	635.4	439.0	340.7	281.8	242.5	214.4	193.4	177.0	163.9	153.2	144.3	136.7	130.2	124.6	119.7	115.4	111.5	108.1	105.0	102.2	99.6	97.3	95.1	93.2	91.4	89.7	88.1	86.7	85.3	1000
1100	690.6	476.4	369.3	305.0	262.2	231.6	208.6	190.8	176.5	164.8	155.0	146.8	139.7	133.6	128.3	123.5	119.3	115.6	112.2	109.1	106.4	103.8	101.5	99.3	97.4	95.5	93.8	92.2	90.8	1100
1200	745.9	513.9	397.9	328.3	281.8	248.7	223.8	204.5	189.0	176.4	165.8	156.9	149.3	142.6	136.8	131.7	127.2	123.1	119.4	116.1	113.1	110.3	107.8	105.5	103.4	101.4	99.5	97.8	96.2	1200
1300	801.1	551.4	426.4	351.5	301.5	265.8	239.1	218.3	201.6	188.0	176.6	167.0	158.8	151.6	145.4	139.9	135.0	130.6	126.6	123.1	119.8	116.9	114.2	111.7	109.4	107.2	105.2	103.4	101.7	1300
1400	856.4	588.8	455.0	374.7	321.2	283.0	254.3	232.0	214.2	199.6	187.4	177.1	168.3	160.6	153.9	148.1	142.8	138.1	133.9	130.1	126.6	123.4	120.5	117.8	115.4	113.1	110.9	109.0	107.1	1400
1500	911.7	626.3	483.6	398.0	340.9	300.1	269.5	245.8	226.7	211.2	198.2	187.2	177.8	169.7	162.5	156.2	150.6	145.6	141.1	137.0	133.3	129.9	126.8	124.0	121.4	118.9	116.6	114.5	112.6	1500
Term. 2/	82.870	64.285	54.990	49.415	45.695	43.040	41.050	39.500	38.260	37.250	36.405	35.690	35.075	34.545	34.080	33.670	33.305	32.980	32.685	32.420	32.180	31.960	31.755	31.570	31.400	31.240	31.095	30.955	30.825	Term. 2/
L. H. 3/	.55252	.37467	.28572	.23237	.19679	.17138	.15232	.13750	.12564	.11594	.10785	.10102	.09515	.09007	.08562	.08170	.07821	.07509	.07228	.06974	.06743	.06532	.06339	.06161	.05997	.05845	.05703	.05572	.05449	L. H. 3/

1/ Based on a tare weight of 23.3 tons and a ratio of empty car miles to loaded car miles of 0.350. The Less-carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.
For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.21.
For Cost Level III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.31.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.
See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 4 - Total Eastern, incl. N. E. & No. Ill.

BOX CARS

TABLE 22.--TERRITORY NO. 4 - TOTAL EASTERN, including New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.4	17.0	14.6	12.7	11.3	10.2	9.3	8.5	7.9	7.3	6.8	6.4	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.1	3.1	10
20	21.3	17.8	15.3	13.4	11.9	10.7	9.8	9.0	8.3	7.7	7.2	6.8	6.4	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	3.3	20
30	22.3	18.7	16.0	14.0	12.5	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.4	6.0	5.8	5.5	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	30
40	23.3	19.5	16.8	14.7	13.1	11.8	10.8	9.9	9.2	8.5	8.0	7.5	7.1	6.7	6.4	6.1	5.8	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	40
50	24.3	20.3	17.5	15.3	13.7	12.3	11.3	10.4	9.6	8.9	8.4	7.9	7.4	7.0	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.4	4.2	4.1	4.0	3.9	50
60	25.3	21.2	18.2	16.0	14.3	12.9	11.8	10.8	10.0	9.3	8.7	8.2	7.8	7.4	7.0	6.7	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8	4.7	4.6	4.5	4.4	4.2	4.1	60
70	26.3	22.0	18.9	16.6	14.9	13.4	12.2	11.3	10.4	9.7	9.1	8.6	8.1	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.7	4.6	4.5	4.4	70
80	27.3	22.9	19.7	17.3	15.4	14.0	12.7	11.7	10.9	10.1	9.5	8.9	8.4	8.0	7.6	7.3	7.0	6.7	6.4	6.2	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.5	80
90	28.3	23.7	20.4	17.9	16.0	14.5	13.2	12.2	11.3	10.5	9.9	9.3	8.8	8.3	7.9	7.6	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.8	4.7	90
100	29.3	24.5	21.1	18.6	16.6	15.0	13.7	12.6	11.7	10.9	10.3	9.7	9.1	8.7	8.3	7.9	7.5	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.7	5.5	5.3	5.2	5.1	4.9	100
120	31.3	26.2	22.6	19.9	17.8	16.1	14.7	13.6	12.6	11.7	11.0	10.4	9.8	9.3	8.9	8.5	8.1	7.8	7.5	7.2	7.0	6.7	6.5	6.3	6.1	6.0	5.8	5.6	5.5	5.3	120
140	33.3	27.9	24.1	21.2	18.9	17.2	15.7	14.5	13.4	12.5	11.8	11.1	10.5	10.0	9.5	9.1	8.7	8.4	8.0	7.7	7.5	7.2	7.0	6.8	6.6	6.4	6.2	6.1	5.9	5.8	140
160	35.3	29.6	25.5	22.5	20.1	18.2	16.7	15.4	14.3	13.4	12.5	11.8	11.2	10.6	10.1	9.7	9.3	8.9	8.6	8.3	8.0	7.7	7.5	7.3	7.1	6.9	6.7	6.6	6.4	6.2	160
180	37.3	31.3	27.0	23.8	21.3	19.3	17.7	16.3	15.1	14.2	13.3	12.6	11.9	11.3	10.8	10.3	9.9	9.5	9.1	8.8	8.5	8.2	8.0	7.7	7.5	7.3	7.1	6.9	6.8	6.6	180
200	39.3	33.0	28.5	25.1	22.5	20.4	18.6	17.2	16.0	15.0	14.1	13.3	12.6	12.0	11.4	10.9	10.5	10.1	9.7	9.3	9.0	8.7	8.5	8.2	8.0	7.8	7.6	7.4	7.2	7.0	200
220	41.2	34.6	29.9	26.4	23.6	21.4	19.6	18.1	16.9	15.8	14.8	14.0	13.3	12.6	12.0	11.5	11.1	10.6	10.2	9.9	9.5	9.2	9.0	8.7	8.4	8.2	8.0	7.8	7.6	7.4	220
240	43.2	36.3	31.4	27.7	24.8	22.5	20.6	19.0	17.7	16.6	15.6	14.7	14.0	13.3	12.7	12.1	11.6	11.2	10.8	10.4	10.1	9.7	9.4	9.2	8.9	8.7	8.5	8.3	8.0	7.9	240
260	45.2	38.0	32.8	29.0	26.0	23.6	21.6	20.0	18.6	17.4	16.3	15.4	14.6	13.9	13.3	12.7	12.2	11.8	11.3	10.9	10.6	10.2	9.9	9.6	9.4	9.1	8.9	8.7	8.6	8.3	260
280	47.2	39.7	34.3	30.3	27.1	24.6	22.6	20.9	19.4	18.2	17.1	16.2	15.3	14.6	13.9	13.3	12.8	12.3	11.9	11.5	11.1	10.7	10.4	10.1	9.8	9.6	9.3	9.1	8.9	8.7	280
300	49.2	41.4	35.8	31.6	28.3	25.7	23.6	21.8	20.3	19.0	17.9	16.9	16.0	15.3	14.6	14.0	13.4	12.9	12.4	12.0	11.6	11.2	10.9	10.6	10.3	10.0	9.8	9.6	9.4	9.1	300
320	51.2	43.1	37.2	32.9	29.5	26.8	24.6	22.7	21.1	19.8	18.6	17.6	16.7	15.9	15.2	14.6	14.0	13.5	13.0	12.5	12.1	11.7	11.4	11.1	10.8	10.5	10.2	10.0	9.7	9.5	320
340	53.2	44.7	38.7	34.2	30.7	27.8	25.5	23.6	22.0	20.6	19.4	18.3	17.4	16.6	15.8	15.2	14.6	14.0	13.5	13.1	12.6	12.2	11.9	11.5	11.2	10.9	10.7	10.4	10.2	10.0	340
360	55.2	46.4	40.2	35.5	31.8	28.9	26.5	24.5	22.8	21.4	20.2	19.1	18.1	17.2	16.5	15.8	15.2	14.6	14.1	13.6	13.2	12.7	12.4	12.0	11.7	11.4	11.1	10.8	10.6	10.4	360
380	57.2	48.1	41.6	36.8	33.0	30.0	27.5	25.4	23.7	22.2	20.9	19.8	18.8	17.9	17.1	16.4	15.7	15.1	14.6	14.1	13.7	13.2	12.9	12.5	12.2	11.9	11.6	11.3	11.1	10.8	380
400	59.1	49.8	43.1	38.1	34.2	31.0	28.5	26.4	24.6	23.0	21.7	20.5	19.5	18.6	17.7	17.0	16.3	15.7	15.2	14.7	14.2	13.7	13.3	13.0	12.6	12.3	12.0	11.7	11.5	11.2	400
420	61.1	51.5	44.6	39.4	35.3	32.1	29.5	27.3	25.4	23.8	22.4	21.2	20.2	19.2	18.4	17.6	16.9	16.3	15.7	15.2	14.7	14.3	13.8	13.5	13.1	12.8	12.5	12.2	11.9	11.6	420
440	63.1	53.1	46.0	40.7	36.5	33.2	30.5	28.2	26.3	24.6	23.2	22.0	20.8	19.9	19.0	18.2	17.5	16.8	16.3	15.7	15.2	14.8	14.3	13.9	13.6	13.2	12.9	12.6	12.3	12.0	440
460	65.1	54.8	47.5	42.0	37.7	34.2	31.4	29.1	27.1	25.4	23.9	22.7	21.5	20.5	19.6	18.8	18.1	17.4	16.8	16.2	15.7	15.3	14.8	14.4	14.0	13.7	13.3	13.0	12.7	12.5	460
480	67.1	56.5	48.9	43.3	38.8	35.3	32.4	30.0	28.0	26.2	24.7	23.4	22.2	21.2	20.3	19.4	18.7	18.0	17.3	16.8	16.2	15.8	15.3	14.9	14.5	14.1	13.8	13.5	13.2	12.9	480
500	69.1	58.2	50.4	44.6	40.0	36.4	33.4	30.9	28.8	27.0	25.5	24.1	22.9	21.8	20.9	20.0	19.3	18.5	17.9	17.3	16.8	16.3	15.8	15.4	15.0	14.6	14.2	13.9	13.6	13.3	500
600	79.0	66.6	57.7	51.1	45.9	41.7	38.3	35.5	33.1	31.1	29.3	27.7	26.4	25.1	24.1	23.1	22.2	21.4	20.6	20.0	19.3	18.8	18.2	17.7	17.3	16.8	16.4	16.1	15.7	15.4	600
700	89.0	75.0	65.0	57.5	51.7	47.1	43.3	40.1	37.4	35.1	33.1	31.3	29.8	28.4	27.2	26.1	25.1	24.2	23.4	22.6	21.9	21.3	20.7	20.1	19.6	19.1	18.7	18.2	17.8	17.5	700
800	98.9	83.4	72.4	64.0	57.6	52.4	48.2	44.7	41.7	39.1	36.9	35.0	33.3	31.7	30.4	29.1	28.0	27.0	26.1	25.3	24.5	23.8	23.1	22.5	21.9	21.4	20.9	20.4	20.0	19.6	800
900	108.9	91.8	79.7	70.5	63.4	57.8	53.1	49.2	46.0	43.1	40.7	38.6	36.7	35.0	33.5	32.2	31.0	29.9	28.8	27.9	27.1	26.3	25.6	24.9	24.2	23.7	23.1	22.6	22.1	21.7	900
1000	118.8	100.3	87.0	77.0	69.3	63.1	58.0	53.8	50.2	47.2	44.5	42.2	40.1	38.3	36.7	35.2	33.9	32.7	31.6	30.6	29.6	28.8	28.0	27.3	26.6	25.9	25.3	24.8	24.2	23.7	1000
1100	128.8	108.7	94.3	83.5	75.1	68.4	62.9	58.4	54.5	51.2	48.3	45.8	43.6	41.6	39.8	38.3	36.8	35.5	34.3	33.2	32.2	31.3	30.4	29.6	28.9	28.2	27.6	26.9	26.4	25.8	1100
1200	138.7	117.1	101.6	90.0	81.0	73.8	67.9	63.0	58.8	55.2	52.1	49.4	47.0	44.9	43.0	41.3	39.8	38.3	37.1	35.9	34.8	33.8	32.9	32.0	31.2	30.5	29.8	29.1	28.5	27.9	1200
1300	148.7	125.5	108.9	96.5	86.8	79.1	72.8	67.5	63.1	59.2	55.9	53.0	50.5	48.2	46.2	44.3	42.7	41.2	39.8	38.5	37.4	36.3	35.3	34.4	33.5	32.7	32.0	31.3	30.6	30.0	1300
1400	158.6	133.9	116.2	103.0	92.7	84.5	77.7	72.1	67.3	63.3	59.7	56.6	53.9	51.5	49.3	47.4	45.6	44.0	42.5	41.2	40.0	38.8	37.8	36.8	35.9	35.0	34.2	33.5	32.8	32.1	1400
1500	168.6	142.3	123.6	109.5	98.6	89.8	82.6	76.7	71.6	67.3	63.5	60.3	57.4	54.8	52.5	50.4	48.5	46.8	45.3	43.8	42.5	41.3	40.2	39.2	38.2	37.3	36.4	35.6	34.9	34.2	1500
1600	178.5	150.7	130.9	116.0	104.4	95.1	87.6	81.2	75.9	71.3	67.3	63.9	60.7	58.1	55.6	53.5	51.5	49.7	48.0	46.5	45.1	43.8	42.6	41.5	40.5	39.6	38.7	37.8	37.0	36.3	1600
1700	188.5	159.1	138.2	122.5	110.3	100.5	92.5	85.8	80.2	75.3	71.2	67.5	64.3	61.4	58.8	56.5	54.4	52.5	50.8	49.2	47.7	46.3	45.1	43.9	42.8	41.8	40.9	40.0	39.2	38.4	1700
1800	198.4	167.6	145.5	129.0	116.1	105.8	97.4	90.4	84.5	79.4	75.0	71.1	67.7	64.7	62.0	59.5	57.3	55.3	53.5	51.8	50.3	48.8	47.5	46.3	45.2	44.1	43.1	42.2	41.3	40.5	1800
Term. 2/	19.356	16.130	13.826	12.098	10.753	9.678	8.798	8.065	7.445	6.913	6.452	6.049	5.693	5.377	5.094	4.839	4.609	4.399	4.208	4.033	3.871	3.722	3.584	3.456	3.337	3.226	3.122	3.024	2.933	2.846	Term. 2/
L. H. 3/	.099480	.084125	.073157	.064931	.058533	.053415	.049227	.045738	.042755	.040254	.038080	.036141	.034347	.032942	.031595	.030383	.029285	.028279	.027373	.026544	.025770	.025047	.024411	.023802	.023234	.022705	.022210	.021745	.021309	.020899	L. H. 3/

1/ Based on a tare weight of 23.0 tons and a ratio of empty car miles to loaded car miles of 0.340. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.63.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 22 (Concluded).—TERRITORY NO. 4 - TOTAL EASTERN, including New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	10
20	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	20
30	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	30
40	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	40
50	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	50
60	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	60
70	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	70
80	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.7	80
90	4.6	4.5	4.3	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.9	2.9	2.8	2.8	90
100	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	100
120	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.3	120
140	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	140
160	6.0	5.9	5.8	5.7	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	160
180	6.5	6.3	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	180
200	6.9	6.7	6.6	6.4	6.3	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	200
220	7.3	7.1	7.0	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	220
240	7.7	7.5	7.4	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	5.0	240
260	8.1	7.9	7.8	7.6	7.5	7.3	7.2	7.1	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	5.4	5.3	5.3	5.3	5.3	260
280	8.5	8.3	8.2	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.6	280
300	8.9	8.7	8.6	8.4	8.2	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	5.9	5.9	300
320	9.3	9.1	9.0	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.4	6.3	6.2	6.2	320
340	9.7	9.5	9.3	9.2	9.0	8.8	8.7	8.5	8.4	8.3	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.7	6.6	6.5	6.5	340
360	10.1	9.9	9.7	9.6	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	360
380	10.6	10.3	10.1	9.9	9.8	9.6	9.4	9.3	9.1	9.0	8.8	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	380
400	11.0	10.7	10.5	10.3	10.1	10.0	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.5	8.3	8.2	8.1	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	400
420	11.4	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	420
440	11.8	11.6	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.0	9.9	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.0	7.9	440
460	12.2	12.0	11.7	11.5	11.3	11.1	10.9	10.7	10.6	10.4	10.2	10.1	9.9	9.8	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	460
480	12.6	12.4	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.8	10.6	10.4	10.3	10.2	10.0	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.7	8.6	8.5	480
500	13.0	12.8	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.8	10.6	10.5	10.4	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	9.0	8.9	8.8	500
600	15.1	14.8	14.5	14.2	14.0	13.7	13.5	13.3	13.1	12.9	12.7	12.5	12.3	12.2	12.0	11.9	11.7	11.6	11.5	11.3	11.2	11.1	11.0	10.8	10.7	10.6	10.5	10.4	10.3	10.2	600
700	17.1	16.8	16.5	16.2	15.9	15.6	15.4	15.1	14.9	14.7	14.5	14.3	14.1	13.9	13.7	13.5	13.4	13.2	13.1	12.9	12.8	12.6	12.5	12.4	12.3	12.1	12.0	11.9	11.8	11.7	700
800	19.2	18.8	18.5	18.1	17.8	17.5	17.2	17.0	16.7	16.5	16.2	16.0	15.8	15.6	15.4	15.2	15.0	14.8	14.7	14.5	14.3	14.2	14.0	13.9	13.8	13.6	13.5	13.4	13.3	13.2	800
900	21.2	20.8	20.4	20.1	19.7	19.4	19.1	18.8	18.5	18.2	18.0	17.7	17.5	17.3	17.1	16.8	16.6	16.4	16.3	16.1	15.9	15.7	15.6	15.4	15.3	15.1	15.0	14.9	14.7	14.6	900
1000	23.3	22.8	22.4	22.0	21.6	21.3	20.9	20.6	20.3	20.0	19.7	19.5	19.2	19.0	18.7	18.5	18.3	18.1	17.9	17.7	17.5	17.3	17.1	17.0	16.8	16.6	16.5	16.3	16.2	16.1	1000
1100	25.3	24.8	24.4	24.0	23.6	23.2	22.8	22.5	22.1	21.8	21.5	21.2	20.9	20.7	20.4	20.2	19.9	19.7	19.5	19.3	19.1	18.9	18.7	18.5	18.3	18.1	18.0	17.8	17.7	17.5	1100
1200	27.4	26.9	26.4	25.9	25.5	25.1	24.7	24.3	23.9	23.6	23.3	22.9	22.6	22.4	22.1	21.8	21.6	21.3	21.1	20.8	20.6	20.4	20.2	20.0	19.8	19.6	19.5	19.3	19.1	19.0	1200
1300	29.4	28.9	28.4	27.9	27.4	26.9	26.5	26.1	25.7	25.4	25.0	24.7	24.4	24.0	23.8	23.5	23.2	22.9	22.7	22.4	22.2	22.0	21.8	21.5	21.3	21.1	21.0	20.8	20.6	20.4	1300
1400	31.5	30.9	30.3	29.8	29.3	28.8	28.4	27.9	27.5	27.1	26.8	26.4	26.1	25.7	25.4	25.1	24.8	24.6	24.3	24.0	23.8	23.5	23.3	23.1	22.9	22.7	22.4	22.3	22.1	21.9	1400
1500	33.5	32.9	32.3	31.8	31.2	30.7	30.2	29.8	29.3	28.9	28.5	28.2	27.8	27.4	27.1	26.8	26.5	26.2	25.9	25.6	25.3	25.1	24.8	24.6	24.4	24.2	23.9	23.7	23.5	23.3	1500
1600	35.6	34.9	34.3	33.7	33.1	32.6	32.1	31.6	31.2	30.7	30.3	29.9	29.5	29.1	28.8	28.4	28.1	27.8	27.5	27.2	26.9	26.6	26.4	26.1	25.9	25.7	25.4	25.2	25.0	24.8	1600
1700	37.6	36.9	36.3	35.6	35.1	34.5	34.0	33.4	33.0	32.5	32.0	31.6	31.2	30.8	30.5	30.1	29.7	29.4	29.1	28.8	28.5	28.2	27.9	27.7	27.4	27.2	26.9	26.7	26.5	26.2	1700
1800	39.7	39.0	38.3	37.6	37.0	36.4	35.8	35.3	34.8	34.3	33.8	33.4	32.9	32.5	32.1	31.7	31.4	31.0	30.7	30.4	30.1	29.8	29.5	29.2	28.9	28.7	28.4	28.2	27.9	27.7	1800
Term. 2/	2.765	2.688	2.616	2.547	2.482	2.420	2.360	2.304	2.251	2.200	2.151	2.104	2.059	2.016	1.975	1.936	1.898	1.861	1.826	1.792	1.760	1.728	1.698	1.669	1.640	1.613	1.587	1.561	1.536	1.512	Term. 2/
L. H. 3/	.020511	.020146	.019800	.019472	.019162	.018866	.018585	.018318	.018063	.017819	.017587	.017364	.017151	.016947	.016751	.016563	.016382	.016209	.016042	.015881	.015725	.015576	.015432	.015292	.015158	.015028	.014902	.014780	.014662	.014548	L. H. 3/

1/ Based on a tare weight of 23.0 tons and a ratio of empty car miles to loaded car miles of 0.340. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.63.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 4 - Total Eastern, incl. N. E. & No. Ill.

FLAT CARS

TABLE 23.—TERRITORY NO. 4 - TOTAL EASTERN, including New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.6	17.2	14.8	12.9	11.5	10.3	9.4	8.6	8.0	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.7	4.5	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	10
20	21.9	18.3	15.7	13.7	12.2	11.0	10.0	9.2	8.5	7.9	7.4	6.9	6.5	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.5	3.4	3.3	20
30	23.2	19.3	16.6	14.6	13.0	11.7	10.6	9.8	9.0	8.4	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	30
40	24.4	20.4	17.5	15.4	13.7	12.4	11.3	10.4	9.6	8.9	8.3	7.8	7.4	7.0	6.6	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.8	40
50	25.7	21.5	18.5	16.2	14.4	13.0	11.9	10.9	10.1	9.4	8.8	8.3	7.8	7.4	7.0	6.7	6.4	6.1	5.9	5.6	5.4	5.2	5.1	4.9	4.7	4.6	4.5	4.3	4.2	4.1	50
60	27.0	22.6	19.4	17.0	15.2	13.7	12.5	11.5	10.6	9.9	9.3	8.7	8.2	7.8	7.4	7.1	6.8	6.5	6.2	6.0	5.7	5.5	5.4	5.2	5.0	4.9	4.7	4.6	4.5	4.3	60
70	28.2	23.6	20.3	17.8	15.9	14.4	13.1	12.1	11.2	10.4	9.8	9.2	8.7	8.2	7.8	7.4	7.1	6.8	6.5	6.3	6.1	5.8	5.6	5.5	5.3	5.1	5.0	4.8	4.7	4.6	70
80	29.5	24.7	21.2	18.7	16.7	15.1	13.7	12.6	11.7	10.9	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.2	6.9	6.6	6.4	6.2	5.9	5.8	5.6	5.4	5.3	5.1	5.0	4.8	80
90	30.8	25.8	22.2	19.5	17.4	15.7	14.4	13.2	12.2	11.4	10.7	10.1	9.5	9.0	8.6	8.2	7.8	7.5	7.2	6.9	6.7	6.5	6.2	6.0	5.9	5.7	5.5	5.4	5.2	5.1	90
100	32.1	26.8	23.1	20.3	18.1	16.4	15.0	13.8	12.8	11.9	11.2	10.5	9.9	9.4	9.0	8.6	8.2	7.9	7.5	7.3	7.0	6.8	6.5	6.3	6.1	6.0	5.8	5.6	5.5	5.3	100
120	34.6	29.0	25.0	22.0	19.6	17.7	16.2	14.9	13.8	12.9	12.1	11.4	10.8	10.2	9.8	9.3	8.9	8.5	8.2	7.9	7.6	7.4	7.1	6.9	6.7	6.5	6.3	6.1	6.0	5.8	120
140	37.1	31.1	26.8	23.6	21.1	19.1	17.4	16.1	14.9	13.9	13.1	12.3	11.6	11.1	10.5	10.1	9.6	9.2	8.9	8.6	8.2	8.0	7.7	7.5	7.3	7.0	6.9	6.7	6.5	6.3	140
160	39.7	33.3	28.7	25.2	22.6	20.4	18.7	17.2	16.0	14.9	14.0	13.2	12.5	11.9	11.3	10.8	10.3	9.9	9.5	9.2	8.9	8.6	8.3	8.0	7.8	7.6	7.4	7.2	7.0	6.8	160
180	42.2	35.4	30.5	26.9	24.0	21.8	19.9	18.4	17.0	15.9	15.0	14.1	13.3	12.7	12.1	11.5	11.1	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.4	8.1	7.9	7.7	7.5	7.3	180
200	44.7	37.5	32.4	28.5	25.5	23.1	21.1	19.5	18.1	16.9	15.9	15.0	14.2	13.5	12.9	12.3	11.8	11.3	10.9	10.5	10.1	9.8	9.5	9.2	8.9	8.7	8.5	8.2	8.0	7.8	200
220	47.3	39.7	34.2	30.2	27.0	24.5	22.4	20.6	19.2	17.9	16.8	15.9	15.0	14.3	13.6	13.0	12.5	12.0	11.5	11.1	10.8	10.4	10.1	9.8	9.5	9.2	9.0	8.8	8.5	8.3	220
240	49.8	41.8	36.1	31.8	28.5	25.8	23.6	21.8	20.2	18.9	17.8	16.8	15.9	15.1	14.4	13.8	13.2	12.7	12.2	11.8	11.4	11.0	10.7	10.3	10.1	9.8	9.5	9.3	9.0	8.8	240
260	52.4	44.0	38.0	33.4	29.9	27.1	24.8	22.9	21.3	19.9	18.7	17.7	16.8	15.9	15.2	14.5	13.9	13.4	12.9	12.4	12.0	11.6	11.3	10.9	10.6	10.3	10.0	9.8	9.6	9.3	260
280	54.9	46.1	39.8	35.1	31.4	28.5	26.1	24.1	22.4	20.9	19.7	18.6	17.6	16.7	16.0	15.3	14.6	14.1	13.5	13.1	12.6	12.2	11.8	11.5	11.2	10.9	10.6	10.3	10.1	9.8	280
300	57.4	48.2	41.7	36.7	32.9	29.8	27.3	25.2	23.5	21.9	20.6	19.5	18.5	17.5	16.7	16.0	15.4	14.8	14.2	13.7	13.3	12.8	12.4	12.1	11.7	11.4	11.1	10.8	10.6	10.3	300
320	60.0	50.4	43.5	38.4	34.4	31.2	28.5	26.4	24.5	22.9	21.6	20.4	19.3	18.4	17.5	16.8	16.1	15.4	14.9	14.4	13.9	13.4	13.0	12.6	12.3	12.0	11.6	11.4	11.1	10.8	320
340	62.5	52.5	45.4	40.0	35.8	32.5	29.8	27.5	25.6	23.9	22.5	21.3	20.2	19.2	18.3	17.5	16.8	16.1	15.5	15.0	14.5	14.0	13.6	13.2	12.8	12.5	12.2	11.9	11.6	11.3	340
360	65.1	54.7	47.2	41.7	37.3	33.9	31.0	28.7	26.7	24.9	23.5	22.2	21.0	20.0	19.1	18.3	17.5	16.8	16.2	15.6	15.1	14.6	14.2	13.8	13.4	13.0	12.7	12.4	12.1	11.8	360
380	67.6	56.8	49.1	43.3	38.8	35.2	32.3	29.8	27.7	25.9	24.4	23.0	21.9	20.8	19.8	19.0	18.2	17.5	16.9	16.3	15.8	15.3	14.8	14.4	14.0	13.6	13.2	12.9	12.6	12.3	380
400	70.1	58.9	50.9	44.9	40.3	36.5	33.5	30.9	28.8	26.9	25.3	23.9	22.7	21.6	20.6	19.7	18.9	18.2	17.5	16.9	16.4	15.9	15.4	14.9	14.5	14.1	13.8	13.4	13.1	12.8	400
420	72.7	61.1	52.8	46.6	41.7	37.9	34.7	32.1	29.9	27.9	26.3	24.8	23.6	22.4	21.4	20.5	19.7	18.9	18.2	17.6	17.0	16.5	16.0	15.5	15.1	14.7	14.3	14.0	13.6	13.3	420
440	75.2	63.2	54.7	48.2	43.2	39.2	36.0	33.2	30.9	28.9	27.2	25.7	24.4	23.2	22.2	21.2	20.4	19.6	18.9	18.2	17.6	17.1	16.6	16.1	15.6	15.2	14.8	14.5	14.1	13.8	440
460	77.8	65.4	56.5	49.9	44.7	40.6	37.2	34.4	32.0	29.9	28.2	26.6	25.3	24.0	23.0	22.0	21.1	20.3	19.5	18.9	18.3	17.7	17.2	16.7	16.2	15.8	15.4	15.0	14.7	14.3	460
480	80.3	67.5	58.4	51.5	46.2	41.9	38.4	35.5	33.1	30.9	29.1	27.5	26.1	24.9	23.7	22.7	21.8	21.0	20.2	19.5	18.9	18.3	17.7	17.2	16.8	16.3	15.9	15.5	15.2	14.8	480
500	82.8	69.6	60.2	53.2	47.7	43.3	39.7	36.7	34.1	31.9	30.1	28.4	27.0	25.7	24.5	23.5	22.5	21.7	20.9	20.2	19.5	18.9	18.3	17.8	17.3	16.9	16.4	16.0	15.7	15.3	500
600	95.5	80.3	69.5	61.4	55.0	50.0	45.8	42.4	39.5	37.0	34.8	32.9	31.2	29.7	28.4	27.2	26.1	25.1	24.2	23.4	22.6	21.9	21.3	20.7	20.1	19.6	19.1	18.6	18.2	17.8	600
700	108.2	91.0	78.8	69.6	62.4	56.7	52.0	48.1	44.8	42.0	39.5	37.4	35.5	33.8	32.3	30.9	29.7	28.6	27.6	26.6	25.8	25.0	24.2	23.6	22.9	22.3	21.8	21.3	20.8	20.3	700
800	120.9	101.8	88.1	77.8	69.8	63.4	58.2	53.8	50.1	47.0	44.2	41.8	39.7	37.8	36.2	34.6	33.3	32.0	30.9	29.8	28.9	28.0	27.2	26.4	25.7	25.1	24.4	23.9	23.3	22.8	800
900	133.6	112.5	97.3	86.0	77.2	70.1	64.3	59.5	55.5	52.0	49.0	46.3	44.0	41.9	40.0	38.4	36.9	35.5	34.2	33.1	32.0	31.0	30.1	29.3	28.5	27.8	27.1	26.5	25.9	25.3	900
1000	146.3	123.2	106.6	94.2	84.6	76.8	70.5	65.3	60.8	57.0	53.7	50.8	48.2	46.0	43.9	42.1	40.4	38.9	37.6	36.3	35.1	34.1	33.1	32.2	31.3	30.5	29.8	29.1	28.4	27.8	1000
1100	159.0	133.9	115.9	102.4	91.9	83.5	76.7	71.0	66.1	62.0	58.4	55.2	52.5	50.0	47.8	45.8	44.0	42.4	40.9	39.5	38.3	37.1	36.0	35.0	34.1	33.2	32.4	31.7	31.0	30.3	1100
1200	171.7	144.6	125.2	110.6	99.3	90.3	82.9	76.7	71.5	67.0	63.1	59.7	56.7	54.1	51.7	49.5	47.6	45.8	44.2	42.8	41.4	40.1	39.0	37.9	36.9	36.0	35.1	34.3	33.5	32.8	1200
1300	184.4	155.3	134.4	118.8	106.7	97.0	89.0	82.4	76.8	72.0	67.8	64.2	61.0	58.1	55.6	53.3	51.2	49.3	47.6	46.0	44.5	43.2	41.9	40.8	39.7	38.7	37.8	36.9	36.0	35.3	1300
1400	197.1	166.0	143.7	127.0	114.1	103.7	95.2	88.1	82.1	77.0	72.6	68.7	65.2	62.2	59.5	57.0	54.8	52.7	50.9	49.2	47.7	46.2	44.9	43.6	42.5	41.4	40.4	39.5	38.6	37.8	1400
1500	209.8	176.7	153.0	135.3	121.5	110.4	101.4	93.8	87.5	82.0	77.3	73.1	69.5	66.2	63.3	60.7	58.4	56.2	54.2	52.4	50.8	49.3	47.8	46.5	45.3	44.2	43.1	42.1	41.1	40.3	1500
1600	222.5	187.4	162.3	143.5	128.8	117.1	107.5	99.6	92.8	87.0	82.0	77.6	73.7	70.3	67.2	64.4	61.9	59.7	57.6	55.7	53.9	52.3	50.8	49.4	48.1	46.9	45.7	44.7	43.7	42.8	1600
1700	235.2	198.1	171.6	151.7	136.2	123.8	113.7	105.3	98.1	92.0	86.7	82.1	78.0	74.4	71.1	68.2	65.5	63.1	60.9	58.9	57.0	55.3	53.7	52.3	50.9	49.6	48.4	47.3	46.2	45.2	1700
1800	247.9	208.8	180.8	159.9	143.6	130.6	119.9	111.0	103.5	97.0	91.4	86.6	82.8	78.4	75.0	71.9	69.1	66.6	64.2	62.1	60.2	58.4	56.7	55.1	53.7	52.3	51.1	49.9	48.8	47.7	1800
Term. 2/	19.356	16.130	13.826	12.098	10.753	9.678	8.798	8.065	7.445	6.913	6.452	6.049	5.693	5.377	5.094	4.839	4.609	4.399	4.208	4.033	3.871	3.722	3.584	3.456	3.337	3.226	3.122	3.024	2.933	2.846	Term. 2/
L. H. 3/	.126960	.107025	.092786	.082106	.073800	.067155	.061718	.057188	.053354	.050068	.047220	.044728	.042529	.040575	.038826	.037253	.035829	.034534	.033352	.032269	.031272	.030352	.029500	.028709	.027972	.027285	.026642	.026039	.025473	.024940	L. H. 3/

1/ Based on a tare weight of 20.5 tons and a ratio of empty car miles to loaded car miles of 0.838. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.63.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 23 (Concluded).—TERRITORY NO. 4 - TOTAL EASTERN, including New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.9	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	10
20	3.3	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	20
30	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	30
40	3.7	3.6	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	40
50	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	50
60	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	60
70	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.7	2.7	70
80	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	80
90	5.0	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	90
100	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	100
120	5.7	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	120
140	6.2	6.0	5.9	5.8	5.7	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	140
160	6.7	6.5	6.4	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	160
180	7.2	7.0	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	180
200	7.7	7.5	7.3	7.2	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	5.0	4.9	4.9	200
220	8.1	8.0	7.8	7.6	7.5	7.3	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.2	5.2	220
240	8.6	8.4	8.3	8.1	7.9	7.8	7.6	7.5	7.4	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	240
260	9.1	8.9	8.7	8.5	8.4	8.2	8.1	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	6.0	5.9	5.9	260
280	9.6	9.4	9.2	9.0	8.8	8.7	8.5	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.3	6.2	280
300	10.1	9.9	9.7	9.5	9.3	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	300
320	10.6	10.4	10.1	9.9	9.7	9.6	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	6.9	6.9	320
340	11.1	10.8	10.6	10.4	10.2	10.0	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	340
360	11.6	11.3	11.1	10.9	10.6	10.4	10.3	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.5	360
380	12.1	11.8	11.6	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.9	380
400	12.5	12.3	12.0	11.8	11.6	11.3	11.1	10.9	10.8	10.6	10.4	10.2	10.1	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	400
420	13.0	12.8	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.7	10.5	10.3	10.2	10.0	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	420
440	13.5	13.2	13.0	12.7	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.7	10.6	10.4	10.3	10.2	10.0	10.0	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	440
460	14.0	13.7	13.4	13.2	12.9	12.7	12.5	12.2	12.0	11.8	11.6	11.5	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	460
480	14.5	14.2	13.9	13.6	13.4	13.1	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	480
500	15.0	14.7	14.4	14.1	13.8	13.6	13.3	13.1	12.9	12.7	12.5	12.3	12.1	11.9	11.8	11.6	11.4	11.3	11.1	11.0	10.9	10.7	10.6	10.5	10.4	10.3	10.2	10.1	10.0	9.9	500
600	17.4	17.1	16.7	16.4	16.1	15.8	15.5	15.3	15.0	14.8	14.5	14.3	14.1	13.9	13.7	13.5	13.3	13.2	13.0	12.8	12.7	12.5	12.4	12.3	12.1	12.0	11.9	11.8	11.6	11.5	600
700	19.9	19.5	19.1	18.7	18.4	18.0	17.7	17.4	17.1	16.9	16.6	16.3	16.1	15.9	15.7	15.5	15.3	15.1	14.9	14.7	14.5	14.3	14.2	14.0	13.9	13.7	13.6	13.5	13.3	13.2	700
800	22.3	21.9	21.4	21.0	20.6	20.3	19.9	19.6	19.3	19.0	18.7	18.4	18.1	17.9	17.6	17.4	17.2	16.9	16.7	16.5	16.3	16.2	16.0	15.8	15.6	15.5	15.3	15.2	15.0	14.9	800
900	24.8	24.3	23.8	23.3	22.9	22.5	22.1	21.7	21.4	21.0	20.7	20.4	20.1	19.8	19.6	19.3	19.1	18.8	18.6	18.4	18.2	18.0	17.8	17.6	17.4	17.2	17.0	16.9	16.7	16.5	900
1000	27.2	26.7	26.1	25.6	25.2	24.7	24.3	23.9	23.5	23.1	22.8	22.5	22.1	21.8	21.5	21.2	21.0	20.7	20.5	20.2	20.0	19.8	19.5	19.3	19.1	18.9	18.7	18.6	18.4	18.2	1000
1100	29.6	29.0	28.5	27.9	27.4	27.0	26.5	26.1	25.6	25.2	24.9	24.5	24.1	23.8	23.5	23.2	22.9	22.6	22.3	22.1	21.8	21.6	21.3	21.1	20.9	20.7	20.5	20.3	20.1	19.9	1100
1200	32.1	31.4	30.8	30.3	29.7	29.2	28.7	28.2	27.8	27.3	26.9	26.5	26.1	25.8	25.4	25.1	24.8	24.5	24.2	23.9	23.6	23.4	23.1	22.9	22.6	22.4	22.2	22.0	21.7	21.5	1200
1300	34.5	33.8	33.2	32.6	32.0	31.4	30.9	30.4	29.9	29.4	29.0	28.6	28.2	27.8	27.4	27.0	26.7	26.4	26.1	25.7	25.5	25.2	24.9	24.6	24.4	24.1	23.9	23.7	23.4	23.2	1300
1400	37.0	36.2	35.5	34.9	34.2	33.6	33.1	32.5	32.0	31.5	31.0	30.6	30.2	29.7	29.4	29.0	28.6	28.3	27.9	27.6	27.3	27.0	26.7	26.4	26.1	25.9	25.6	25.4	25.1	24.9	1400
1500	39.4	38.6	37.9	37.2	36.5	35.9	35.3	34.7	34.1	33.6	33.1	32.6	32.3	31.7	31.3	30.9	30.5	30.1	29.8	29.4	29.1	28.8	28.5	28.2	27.9	27.6	27.3	27.1	26.8	26.6	1500
1600	41.9	41.0	40.2	39.5	38.8	38.1	37.5	36.8	36.3	35.7	35.2	34.7	34.2	33.7	33.3	32.8	32.4	32.0	31.6	31.3	30.9	30.6	30.2	29.9	29.6	29.3	29.0	28.8	28.5	28.2	1600
1700	44.3	43.4	42.6	41.8	41.0	40.3	39.7	39.0	38.4	37.8	37.2	36.7	36.2	35.7	35.2	34.8	34.3	33.9	33.5	33.1	32.7	32.4	32.0	31.7	31.4	31.1	30.7	30.5	30.2	29.9	1700
1800	46.8	45.8	44.9	44.1	43.3	42.6	41.8	41.2	40.5	39.9	39.3	38.7	38.2	37.7	37.2	36.7	36.2	35.8	35.4	35.0	34.6	34.2	33.8	33.5	33.1	32.8	32.5	32.2	31.9	31.6	1800
Term. 2/	2.765	2.688	2.616	2.547	2.482	2.420	2.360	2.304	2.251	2.200	2.151	2.104	2.059	2.016	1.975	1.936	1.898	1.861	1.826	1.792	1.760	1.728	1.698	1.669	1.640	1.613	1.587	1.561	1.536	1.512	Term. 2/
L. H. 3/	.024437	.023963	.023514	.023088	.022685	.022301	.021937	.021589	.021258	.020942	.020640	.020351	.020074	.019809	.019555	.019311	.019076	.018851	.018634	.018425	.018224	.018029	.017842	.017661	.017486	.017318	.017154	.016996	.016843	.016695	L. H. 3/

1/ Based on a tare weight of 20.5 tons and a ratio of empty car miles to loaded car miles of 0.838. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III, Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.63.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 4 - Total Eastern, incl. N. E. & No. Ill.

GONDOLA AND HOPPER CARS

TABLE 24.--TERRITORY NO. 4 - TOTAL EASTERN, including New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.7	17.2	14.8	12.9	11.5	10.4	9.4	8.7	8.0	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	10
20	22.0	18.3	15.7	13.8	12.3	11.1	10.1	9.2	8.5	7.9	7.4	7.0	6.6	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	3.4	20
30	23.3	19.5	16.7	14.6	13.0	11.8	10.7	9.8	9.1	8.5	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.2	5.0	4.8	4.7	4.5	4.3	4.2	4.1	3.9	3.8	3.7	3.6	30
40	24.6	20.6	17.7	15.5	13.8	12.5	11.3	10.4	9.6	9.0	8.4	7.9	7.4	7.1	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9	40
50	25.9	21.7	18.6	16.3	14.6	13.1	12.0	11.0	10.2	9.5	8.9	8.4	7.9	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.4	4.2	4.1	50
60	27.2	22.8	19.6	17.2	15.3	13.8	12.6	11.6	10.8	10.0	9.4	8.8	8.3	7.9	7.5	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.4	60
70	28.6	23.9	20.5	18.0	16.1	14.5	13.3	12.2	11.3	10.5	9.9	9.3	8.8	8.3	7.9	7.5	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.8	4.6	70
80	29.9	25.0	21.5	18.9	16.9	15.2	13.9	12.8	11.9	11.0	10.4	9.7	9.2	8.7	8.3	7.9	7.6	7.2	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.0	4.9	80
90	31.2	26.1	22.5	19.7	17.6	15.9	14.5	13.4	12.4	11.6	10.8	10.2	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.6	5.4	5.3	5.2	90
100	32.5	27.2	23.5	20.6	18.4	16.6	15.2	14.0	13.0	12.1	11.3	10.7	10.1	9.6	9.1	8.7	8.3	8.0	7.6	7.4	7.1	6.8	6.6	6.4	6.2	6.0	5.9	5.7	5.5	5.4	100
120	35.1	29.4	25.3	22.3	19.9	18.0	16.5	15.2	14.1	13.1	12.3	11.6	11.0	10.4	9.9	9.4	9.0	8.7	8.3	8.0	7.7	7.5	7.2	7.0	6.8	6.6	6.4	6.2	6.1	5.9	120
140	37.8	31.6	27.3	24.0	21.4	19.4	17.7	16.3	15.2	14.1	13.3	12.5	11.8	11.2	10.7	10.2	9.8	9.4	9.0	8.7	8.4	8.1	7.8	7.6	7.4	7.2	7.0	6.8	6.6	6.4	140
160	40.4	33.9	29.2	25.7	23.0	20.8	19.0	17.5	16.3	15.2	14.2	13.4	12.7	12.1	11.5	11.0	10.5	10.1	9.7	9.3	9.0	8.7	8.4	8.2	7.9	7.7	7.5	7.3	7.1	6.9	160
180	43.0	36.1	31.1	27.4	24.5	22.2	20.3	18.7	17.4	16.2	15.2	14.4	13.6	12.9	12.3	11.7	11.3	10.8	10.4	10.0	9.7	9.3	9.0	8.8	8.5	8.3	8.0	7.8	7.6	7.5	180
200	45.7	38.3	33.0	29.1	26.0	23.6	21.6	19.9	18.5	17.2	16.2	15.3	14.5	13.7	13.1	12.5	12.0	11.5	11.1	10.7	10.3	10.0	9.7	9.4	9.1	8.8	8.6	8.4	8.2	8.0	200
220	48.3	40.5	34.9	30.8	27.5	24.9	22.8	21.1	19.6	18.3	17.2	16.2	15.3	14.6	13.9	13.3	12.7	12.2	11.8	11.3	10.9	10.6	10.3	9.9	9.7	9.4	9.1	8.9	8.7	8.5	220
240	50.9	42.7	36.9	32.5	29.1	26.3	24.1	22.2	20.7	19.3	18.1	17.1	16.2	15.4	14.7	14.1	13.5	12.9	12.4	12.0	11.6	11.2	10.9	10.5	10.2	10.0	9.7	9.4	9.2	9.0	240
260	53.5	44.9	38.8	34.2	30.6	27.7	25.4	23.4	21.8	20.4	19.1	18.0	17.1	16.3	15.5	14.8	14.2	13.6	13.1	12.7	12.2	11.8	11.5	11.1	10.8	10.5	10.2	10.0	9.7	9.5	260
280	56.2	47.2	40.7	35.9	32.1	29.1	26.7	24.6	22.9	21.4	20.1	19.0	18.0	17.1	16.3	15.6	14.9	14.4	13.8	13.3	12.9	12.5	12.1	11.7	11.4	11.1	10.8	10.5	10.3	10.0	280
300	58.8	49.4	42.6	37.6	33.6	30.5	27.9	25.8	24.0	22.4	21.1	19.9	18.9	17.9	17.1	16.4	15.7	15.1	14.5	14.0	13.5	13.1	12.7	12.3	12.0	11.6	11.3	11.0	10.8	10.5	300
320	61.4	51.6	44.6	39.3	35.2	31.9	29.2	27.0	25.1	23.5	22.0	20.8	19.7	18.8	17.9	17.1	16.4	15.8	15.2	14.7	14.2	13.7	13.3	12.9	12.5	12.2	11.9	11.6	11.3	11.0	320
340	64.1	53.8	46.5	41.0	36.7	33.3	30.5	28.1	26.2	24.5	23.0	21.7	20.6	19.6	18.7	17.9	17.2	16.5	15.9	15.3	14.8	14.3	13.9	13.5	13.1	12.8	12.4	12.1	11.8	11.6	340
360	66.7	56.0	48.4	42.7	38.2	34.7	31.8	29.3	27.3	25.5	24.0	22.7	21.5	20.4	19.5	18.7	17.9	17.2	16.6	16.0	15.5	15.0	14.5	14.1	13.7	13.3	13.0	12.7	12.3	12.1	360
380	69.3	58.2	50.3	44.4	39.8	36.1	33.0	30.5	28.4	26.6	25.0	23.6	22.4	21.3	20.3	19.4	18.6	17.9	17.3	16.7	16.1	15.6	15.1	14.7	14.3	13.9	13.5	13.2	12.9	12.6	380
400	71.9	60.4	52.2	46.1	41.3	37.4	34.3	31.7	29.5	27.6	25.9	24.5	23.2	22.1	21.1	20.2	19.4	18.6	17.9	17.3	16.7	16.2	15.7	15.3	14.8	14.4	14.1	13.7	13.4	13.1	400
420	74.6	62.7	54.2	47.8	42.8	38.8	35.6	32.9	30.6	28.6	26.9	25.4	24.1	22.9	21.9	21.0	20.1	19.3	18.6	18.0	17.4	16.8	16.3	15.9	15.4	15.0	14.6	14.3	13.9	13.6	420
440	77.2	64.9	56.1	49.5	44.3	40.2	36.9	34.1	31.7	29.7	27.9	26.4	25.0	23.8	22.7	21.7	20.8	20.0	19.3	18.6	18.0	17.5	16.9	16.4	16.0	15.6	15.2	14.8	14.4	14.1	440
460	79.8	67.1	58.0	51.2	45.9	41.6	38.1	35.2	32.8	30.7	28.9	27.3	25.9	24.6	23.5	22.5	21.6	20.8	20.0	19.3	18.7	18.1	17.5	17.0	16.6	16.1	15.7	15.3	15.0	14.6	460
480	82.5	69.3	59.9	52.9	47.4	43.0	39.4	36.4	33.9	31.7	29.8	28.2	26.7	25.5	24.3	23.3	22.3	21.5	20.7	20.0	19.3	18.7	18.1	17.6	17.1	16.7	16.3	15.9	15.5	15.1	480
500	85.1	71.5	61.8	54.6	48.9	44.4	40.7	37.6	35.0	32.8	30.8	29.1	27.6	26.3	25.1	24.0	23.1	22.2	21.4	20.6	20.0	19.3	18.6	18.2	17.7	17.2	16.8	16.4	16.0	15.6	500
600	98.2	82.6	71.4	63.1	56.5	51.3	47.1	43.5	40.5	37.9	35.7	33.7	32.0	30.5	29.1	27.8	26.8	25.7	24.8	24.0	23.2	22.5	21.8	21.2	20.6	20.0	19.5	19.1	18.6	18.2	600
700	111.4	93.7	81.0	71.5	64.2	58.3	53.4	49.4	46.0	43.1	40.6	38.3	36.4	34.7	33.1	31.7	30.4	29.3	28.2	27.3	26.4	25.6	24.8	24.1	23.5	22.9	22.3	21.7	21.2	20.8	700
800	124.5	104.8	90.6	80.0	71.8	65.2	59.8	55.3	51.5	48.3	45.4	43.0	40.8	38.8	37.1	35.5	34.1	32.8	31.7	30.6	29.6	28.7	27.9	27.1	26.3	25.7	25.0	24.4	23.9	23.3	800
900	137.7	115.8	100.2	88.5	79.4	72.2	66.2	61.2	57.0	53.4	50.3	47.6	45.2	43.0	41.1	39.4	37.8	36.4	35.1	33.9	32.8	31.8	30.9	30.0	29.2	28.5	27.8	27.1	26.5	25.9	900
1000	150.8	126.9	109.8	97.0	87.1	79.1	72.6	67.1	62.5	58.6	55.2	52.2	49.6	47.2	45.1	43.2	41.5	40.0	38.5	37.2	36.0	34.9	33.9	33.0	32.1	31.3	30.5	29.8	29.1	28.5	1000
1100	164.0	138.0	119.4	105.5	94.7	86.0	78.9	73.0	68.0	63.8	60.1	56.8	53.9	51.4	49.1	47.1	45.2	43.5	42.0	40.6	39.3	38.1	37.0	35.9	35.0	34.1	33.2	32.4	31.7	31.0	1100
1200	177.1	149.1	129.0	114.0	102.3	93.0	85.3	79.0	73.6	68.9	64.9	61.4	58.3	55.6	53.1	50.9	48.9	47.1	45.4	43.9	42.5	41.2	40.0	38.9	37.8	36.9	36.0	35.1	34.3	33.6	1200
1300	190.3	160.2	138.6	122.5	110.0	99.9	91.7	84.9	79.1	74.1	69.8	66.0	62.7	59.8	57.1	54.7	52.6	50.6	48.8	47.2	45.7	44.3	43.0	41.8	40.7	39.7	38.7	37.8	36.9	36.1	1300
1400	203.4	171.2	148.2	131.0	117.6	106.9	98.1	90.8	84.6	79.3	74.7	70.6	67.1	63.9	61.1	58.6	56.3	54.2	52.3	50.5	48.9	47.4	46.1	44.8	43.6	42.5	41.4	40.5	39.6	38.7	1400
1500	216.6	182.3	157.8	139.5	125.2	113.8	104.5	96.7	90.1	84.4	79.5	75.3	71.5	68.1	65.1	62.4	60.1	57.7	55.7	53.8	52.1	50.6	49.1	47.7	46.5	45.3	44.2	43.1	42.2	41.3	1500
1600	229.7	193.4	167.4	148.0	132.9	120.7	110.8	102.6	95.6	89.6	84.4	79.9	75.9	72.3	69.1	66.3	63.7	61.3	59.1	57.2	55.4	53.7	52.1	50.7	49.3	48.1	46.9	45.8	44.8	43.8	1600
1700	242.9	204.5	177.0	156.5	140.5	127.7	117.2	108.5	101.1	94.8	89.3	84.5	80.3	76.5	73.1	70.1	67.3	64.9	62.6	60.5	58.6	56.8	55.2	53.6	52.2	50.9	49.7	48.5	47.4	46.4	1700
1800	256.0	215.6	186.7	165.0	148.1	134.6	123.6	114.4	106.6	99.9	94.2	89.1	84.6	80.7	77.1	73.9	71.0	68.4	66.0	63.8	61.8	59.9	58.2	56.6	55.1	53.7	52.4	51.2	50.0	48.9	1800
Term. 2/	19.356	16.130	13.826	12.095	10.753	9.678	8.798	8.065	7.445	6.913	6.452	6.049	5.693	5.377	5.094	4.839	4.609	4.399	4.208	4.033	3.871	3.722	3.584	3.456	3.337	3.226	3.122	3.024	2.933	2.846	Term. 2/
L. H. 3/	.131480	.110792	.096014	.084931	.076311	.069415	.063773	.059071	.055092	.051682	.048727	.046141	.043859	.041831	.040016	.038383	.036905	.035561	.034335	.033210	.032176	.031221	.030337	.029516	.028752	.028038	.027371	.026745	.026158	.025604	L. H. 3/

1/ Based on a tare weight of 22.0 tons and a ratio of empty car miles to loaded car miles of 0.895. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.63.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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TABLE 24 (Concluded).--TERRITORY NO. 4 - TOTAL EASTERN, including New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.9	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	10
20	3.3	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	20
30	3.5	3.4	3.3	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	30
40	3.8	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	40
50	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	50
60	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	60
70	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.7	2.7	70
80	4.8	4.7	4.6	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	80
90	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	90
100	5.3	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	100
120	5.8	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	120
140	6.3	6.1	6.0	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	140
160	6.8	6.6	6.5	6.3	6.2	6.1	6.0	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	160
180	7.3	7.1	7.0	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	180
200	7.8	7.6	7.4	7.3	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.0	5.0	4.9	200
220	8.3	8.1	7.9	7.8	7.6	7.5	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.3	220
240	8.8	8.6	8.4	8.2	8.1	7.9	7.8	7.6	7.5	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	240
260	9.3	9.1	8.9	8.7	8.5	8.4	8.2	8.1	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.1	6.0	5.9	260
280	9.8	9.6	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.4	6.3	280
300	10.3	10.1	9.9	9.7	9.5	9.3	9.1	8.9	8.8	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.8	6.7	6.6	300
320	10.8	10.6	10.3	10.1	9.9	9.7	9.6	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.3	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.0	7.0	320
340	11.3	11.0	10.8	10.6	10.4	10.2	10.0	9.8	9.7	9.5	9.3	9.2	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	340
360	11.8	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	360
380	12.3	12.0	11.8	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.0	380
400	12.8	12.5	12.3	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	400
420	13.3	13.0	12.7	12.5	12.3	12.0	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.5	10.4	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.1	9.0	8.9	8.9	8.8	8.7	420
440	13.8	13.5	13.2	13.0	12.7	12.5	12.3	12.0	11.8	11.6	11.5	11.3	11.1	10.9	10.8	10.6	10.5	10.3	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	440
460	14.3	14.0	13.7	13.4	13.2	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.2	11.0	10.9	10.7	10.6	10.5	10.3	10.2	10.1	10.0	9.9	9.8	9.6	9.5	9.4	9.4	460
480	14.8	14.5	14.2	13.9	13.6	13.4	13.2	12.9	12.7	12.5	12.3	12.1	11.9	11.8	11.6	11.4	11.3	11.1	11.0	10.8	10.7	10.6	10.5	10.3	10.2	10.1	10.0	9.9	9.8	9.7	480
500	15.3	15.0	14.7	14.4	14.1	13.9	13.6	13.4	13.1	12.9	12.7	12.5	12.3	12.2	12.0	11.8	11.7	11.5	11.4	11.2	11.1	10.9	10.8	10.7	10.6	10.5	10.3	10.2	10.1	10.0	500
600	17.8	17.4	17.1	16.8	16.4	16.1	15.9	15.6	15.3	15.1	14.8	14.6	14.4	14.2	14.0	13.8	13.6	13.4	13.3	13.1	12.9	12.8	12.6	12.5	12.4	12.2	12.1	12.0	11.9	11.7	600
700	20.3	19.9	19.5	19.1	18.8	18.4	18.1	17.8	17.5	17.2	17.0	16.7	16.4	16.2	16.0	15.8	15.6	15.4	15.2	15.0	14.8	14.6	14.5	14.3	14.1	14.0	13.9	13.7	13.6	13.4	700
800	22.8	22.4	21.9	21.5	21.1	20.7	20.4	20.0	19.7	19.4	19.1	18.8	18.5	18.2	18.0	17.7	17.5	17.3	17.1	16.9	16.7	16.5	16.3	16.1	15.9	15.8	15.6	15.4	15.3	15.2	800
900	25.3	24.8	24.3	23.9	23.4	23.0	22.6	22.2	21.9	21.5	21.2	20.9	20.6	20.3	20.0	19.7	19.5	19.2	19.0	18.8	18.5	18.3	18.1	17.9	17.7	17.5	17.4	17.2	17.0	16.9	900
1000	27.8	27.3	26.7	26.2	25.7	25.3	24.8	24.4	24.0	23.7	23.3	22.9	22.6	22.3	22.0	21.7	21.4	21.1	20.9	20.6	20.4	20.2	19.9	19.7	19.5	19.3	19.1	18.9	18.7	18.6	1000
1100	30.4	29.7	29.2	28.6	28.1	27.6	27.1	26.6	26.2	25.8	25.4	25.0	24.7	24.3	24.0	23.7	23.4	23.1	22.8	22.5	22.3	22.0	21.8	21.5	21.3	21.1	20.9	20.7	20.5	20.3	1100
1200	32.9	32.2	31.6	31.0	30.4	29.9	29.3	28.9	28.4	27.9	27.5	27.1	26.7	26.4	26.0	25.7	25.3	25.0	24.7	24.4	24.1	23.8	23.6	23.3	23.1	22.8	22.6	22.4	22.2	22.0	1200
1300	35.4	34.7	34.0	33.3	32.7	32.1	31.6	31.1	30.6	30.1	29.6	29.2	28.8	28.4	28.0	27.6	27.3	26.9	26.6	26.3	26.0	25.7	25.4	25.1	24.9	24.6	24.4	24.1	23.9	23.7	1300
1400	37.9	37.1	36.4	35.7	35.1	34.4	33.8	33.3	32.7	32.2	31.7	31.3	30.8	30.4	30.0	29.6	29.2	28.9	28.5	28.2	27.8	27.5	27.2	26.9	26.7	26.4	26.1	25.9	25.6	25.4	1400
1500	40.4	39.6	38.8	38.1	37.4	36.7	36.1	35.5	34.9	34.4	33.9	33.4	32.9	32.5	32.0	31.6	31.2	30.8	30.4	30.1	29.7	29.4	29.1	28.7	28.4	28.2	27.9	27.6	27.3	27.1	1500
1600	42.9	42.0	41.2	40.4	39.7	39.0	38.3	37.7	37.1	36.5	36.0	35.5	34.9	34.5	34.0	33.6	33.1	32.7	32.3	31.9	31.6	31.2	30.9	30.6	30.2	29.9	29.6	29.3	29.1	28.8	1600
1700	45.4	44.5	43.6	42.8	42.0	41.3	40.6	39.9	39.3	38.7	38.1	37.5	37.0	36.5	36.0	35.5	35.1	34.6	34.2	33.8	33.4	33.1	32.7	32.4	32.0	31.7	31.4	31.1	30.8	30.5	1700
1800	47.9	47.0	46.0	45.2	44.4	43.6	42.8	42.1	41.5	40.8	40.2	39.6	39.1	38.5	38.0	37.5	37.0	36.6	36.2	35.7	35.3	34.9	34.5	34.2	33.8	33.5	33.1	32.8	32.5	32.2	1800
Term. 2/	2.765	2.688	2.616	2.547	2.482	2.420	2.360	2.304	2.251	2.200	2.151	2.104	2.059	2.016	1.975	1.936	1.898	1.861	1.826	1.792	1.760	1.728	1.698	1.669	1.640	1.613	1.587	1.561	1.536	1.512	Term. 2/
L. H. 3/	.025083	.024590	.024124	.023683	.023264	.022866	.022488	.022127	.021784	.021456	.021142	.020842	.020555	.020280	.020016	.019763	.019520	.019286	.019060	.018844	.018635	.018433	.018239	.018051	.017869	.017694	.017525	.017360	.017202	.017048	L. H. 3/

1/ Based on a tare weight of 22.0 tons and a ratio of empty car miles to loaded car miles of 0.845. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.63.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 25.--TERRITORY NO. 4 - TOTAL EASTERN, including New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.7	14.7	12.6	11.1	9.9	8.9	8.1	7.4	6.8	6.4	5.9	5.6	5.3	5.0	4.7	4.5	4.3	4.1	3.9	3.7	3.6	3.5	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.7	10
20	19.1	16.0	13.7	12.0	10.7	9.6	8.8	8.1	7.4	6.9	6.5	6.1	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	20
30	20.6	17.2	14.8	13.0	11.5	10.4	9.5	8.7	8.1	7.5	7.0	6.6	6.2	5.9	5.6	5.3	5.1	4.9	4.6	4.5	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	30
40	22.1	18.4	15.8	13.9	12.4	11.2	10.2	9.4	8.7	8.1	7.5	7.1	6.7	6.3	6.0	5.7	5.5	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	40
50	23.5	19.7	16.9	14.8	13.2	11.9	10.9	10.0	9.3	8.6	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	50
60	25.0	20.9	18.0	15.8	14.1	12.7	11.6	10.7	9.9	9.2	8.6	8.1	7.7	7.3	6.9	6.6	6.3	6.0	5.8	5.6	5.3	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.0	60
70	26.4	22.1	19.0	16.7	14.9	13.5	12.3	11.3	10.5	9.8	9.2	8.6	8.1	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.4	4.3	70
80	27.9	23.3	20.1	17.7	15.8	14.2	13.0	12.0	11.1	10.3	9.7	9.1	8.6	8.2	7.8	7.4	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.5	5.3	5.1	5.0	4.9	4.7	4.6	80
90	29.3	24.6	21.1	18.6	16.6	15.0	13.7	12.6	11.7	10.9	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.9	90
100	30.8	25.8	22.2	19.5	17.4	15.8	14.4	13.3	12.3	11.5	10.8	10.1	9.6	9.1	8.6	8.3	7.9	7.6	7.3	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.6	5.4	5.3	5.2	100
120	33.7	28.3	24.3	21.4	19.1	17.3	15.8	14.6	13.5	12.6	11.8	11.1	10.5	10.0	9.5	9.1	8.7	8.3	8.0	7.7	7.5	7.2	7.0	6.7	6.5	6.4	6.2	6.0	5.9	5.7	120
140	36.6	30.7	26.5	23.3	20.8	18.8	17.2	15.9	14.7	13.7	12.9	12.2	11.5	10.9	10.4	9.9	9.5	9.1	8.8	8.4	8.2	7.9	7.6	7.4	7.2	7.0	6.8	6.6	6.4	6.3	140
160	39.6	33.2	28.6	25.2	22.5	20.4	18.6	17.2	15.9	14.9	14.0	13.2	12.5	11.8	11.3	10.8	10.3	9.9	9.5	9.2	8.9	8.6	8.3	8.0	7.8	7.6	7.4	7.2	7.0	6.8	160
180	42.5	35.6	30.7	27.0	24.2	21.9	20.0	18.5	17.2	16.0	15.0	14.2	13.4	12.8	12.2	11.6	11.1	10.7	10.3	9.9	9.6	9.2	8.9	8.7	8.4	8.2	8.0	7.8	7.6	7.4	180
200	45.4	38.1	32.8	28.9	25.9	23.4	21.4	19.8	18.4	17.2	16.1	15.2	14.4	13.7	13.0	12.5	11.9	11.5	11.0	10.6	10.3	9.9	9.6	9.3	9.0	8.8	8.6	8.3	8.1	7.9	200
220	48.3	40.5	35.0	30.8	27.6	25.0	22.8	21.1	19.6	18.3	17.2	16.2	15.4	14.6	13.9	13.3	12.7	12.2	11.8	11.3	11.0	10.6	10.3	10.0	9.7	9.4	9.1	8.9	8.7	8.5	220
240	51.2	43.0	37.1	32.7	29.2	26.5	24.2	22.4	20.8	19.4	18.3	17.2	16.3	15.5	14.8	14.1	13.5	13.0	12.5	12.1	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.5	9.3	9.0	240
260	54.2	45.4	39.2	34.6	30.9	28.0	25.7	23.7	22.0	20.6	19.3	18.2	17.3	16.4	15.7	15.0	14.3	13.8	13.3	12.8	12.4	12.0	11.6	11.2	10.9	10.6	10.3	10.1	9.8	9.6	260
280	57.1	47.9	41.4	36.4	32.6	29.6	27.1	25.0	23.2	21.7	20.4	19.2	18.2	17.3	16.5	15.8	15.2	14.6	14.0	13.5	13.1	12.6	12.2	11.9	11.5	11.2	10.9	10.7	10.4	10.1	280
300	60.0	50.4	43.5	38.3	34.3	31.1	28.5	26.3	24.4	22.8	21.5	20.3	19.2	18.3	17.4	16.7	16.0	15.3	14.8	14.2	13.8	13.3	12.9	12.5	12.2	11.8	11.5	11.2	11.0	10.7	300
320	62.9	52.8	45.6	40.2	36.0	32.6	29.9	27.6	25.6	24.0	22.5	21.3	20.2	19.2	18.3	17.5	16.8	16.1	15.5	15.0	14.5	14.0	13.6	13.2	12.8	12.4	12.1	11.8	11.5	11.3	320
340	65.8	55.3	47.7	42.1	37.7	34.2	31.3	28.9	26.9	25.1	23.6	22.3	21.1	20.1	19.2	18.3	17.6	16.9	16.3	15.7	15.2	14.7	14.2	13.8	13.4	13.1	12.7	12.4	12.1	11.8	340
360	68.9	57.7	49.9	44.0	39.4	35.7	32.7	30.2	28.1	26.3	24.7	23.3	22.1	21.0	20.0	19.2	18.4	17.7	17.0	16.4	15.9	15.4	14.9	14.4	14.0	13.7	13.3	13.0	12.7	12.4	360
380	71.7	60.2	52.0	45.8	41.1	37.2	34.1	31.5	29.3	27.4	25.7	24.3	23.0	21.9	20.9	20.0	19.2	18.4	17.8	17.1	16.6	16.0	15.5	15.1	14.7	14.3	13.9	13.6	13.2	12.9	380
400	74.6	62.6	54.1	47.7	42.7	38.8	35.5	32.8	30.5	28.5	26.8	25.3	24.0	22.8	21.8	20.9	20.0	19.2	18.5	17.9	17.3	16.7	16.2	15.7	15.3	14.9	14.5	14.1	13.8	13.5	400
420	77.5	65.1	56.2	49.6	44.4	40.3	36.9	34.1	31.7	29.7	27.9	26.3	25.0	23.8	22.7	21.7	20.8	20.0	19.3	18.6	18.0	17.4	16.9	16.4	15.9	15.5	15.1	14.7	14.4	14.0	420
440	80.4	67.6	58.4	51.5	46.1	41.8	38.3	35.4	32.9	30.8	29.0	27.4	25.9	24.7	23.5	22.5	21.6	20.8	20.0	19.3	18.7	18.1	17.5	17.0	16.5	16.1	15.7	15.3	14.9	14.6	440
460	83.3	70.0	60.5	53.4	47.8	43.4	39.7	36.7	34.1	31.9	30.0	28.4	26.9	25.6	24.4	23.4	22.4	21.6	20.8	20.0	19.4	18.8	18.2	17.7	17.2	16.7	16.3	15.9	15.5	15.1	460
480	86.3	72.5	62.6	55.2	49.5	44.9	41.1	38.0	35.3	33.1	31.1	29.4	27.9	26.5	25.3	24.2	23.2	22.3	21.5	20.8	20.1	19.4	18.8	18.3	17.8	17.3	16.9	16.5	16.1	15.7	480
500	89.2	74.9	64.7	57.1	51.2	46.4	42.5	39.3	36.6	34.2	32.2	30.4	28.8	27.4	26.2	25.0	24.0	23.1	22.3	21.5	20.8	20.1	19.5	18.9	18.4	17.9	17.5	17.0	16.6	16.2	500
600	103.8	87.2	75.4	66.5	59.6	54.1	49.6	45.8	42.6	39.9	37.5	35.5	33.6	32.0	30.6	29.2	28.1	27.0	26.0	25.1	24.3	23.5	22.8	22.2	21.5	21.0	20.4	19.9	19.5	19.0	600
700	118.4	99.5	86.0	75.9	68.0	61.7	56.6	52.3	48.7	45.6	42.9	40.5	38.4	36.6	34.9	33.4	32.1	30.9	29.8	28.7	27.8	26.9	26.1	25.4	24.7	24.0	23.4	22.8	22.3	21.8	700
800	132.9	111.8	96.6	85.3	76.5	69.4	63.6	58.8	54.7	51.3	48.2	45.6	43.3	41.2	39.3	37.6	36.1	34.8	33.5	32.4	31.3	30.3	29.4	28.6	27.8	27.1	26.4	25.7	25.1	24.6	800
900	147.5	124.0	107.3	94.7	84.9	77.1	70.7	65.3	60.8	56.9	53.6	50.7	48.1	45.9	43.7	41.8	40.2	38.6	37.2	36.0	34.8	33.7	32.7	31.8	30.9	30.1	29.3	28.6	28.0	27.3	900
1000	162.1	136.3	117.9	104.1	93.3	84.7	77.7	71.8	66.9	62.6	58.9	55.7	52.9	50.3	48.1	46.0	44.2	42.5	41.0	39.6	38.3	37.1	36.0	35.0	34.0	33.1	32.3	31.5	30.8	30.1	1000
1100	176.7	148.6	128.5	113.5	101.8	92.4	84.7	78.3	72.9	68.3	64.3	60.8	57.7	54.9	52.5	50.2	48.2	46.4	44.7	43.2	41.8	40.5	39.3	38.2	37.2	36.2	35.3	34.4	33.6	32.9	1100
1200	191.3	160.9	139.2	122.9	110.2	100.1	91.8	84.9	79.0	74.0	69.6	65.8	62.5	59.5	56.8	54.4	52.3	50.3	48.5	46.8	45.3	43.9	42.6	41.4	40.3	39.2	38.3	37.3	36.5	35.7	1200
1300	205.9	173.2	149.8	132.3	118.6	107.7	98.8	91.4	85.1	79.7	75.0	70.9	67.3	64.1	61.2	58.6	56.3	54.2	52.2	50.5	48.8	47.3	45.9	44.6	43.4	42.3	41.2	40.2	39.3	38.4	1300
1400	220.5	185.5	160.4	141.7	127.1	115.4	105.8	97.9	91.1	85.4	80.4	76.0	72.1	68.7	65.6	62.8	60.3	58.1	56.0	54.1	52.3	50.7	49.2	47.8	46.5	45.3	44.2	43.1	42.1	41.2	1400
1500	235.1	197.7	171.1	151.1	135.5	123.1	112.9	104.4	97.2	91.0	85.7	81.0	76.9	73.3	70.0	67.0	64.4	61.9	59.7	57.7	55.8	54.1	52.5	51.0	49.7	48.4	47.2	46.0	45.0	44.0	1500
1600	249.7	210.0	181.7	160.5	143.9	130.7	119.9	110.9	103.3	96.7	91.1	86.1	81.7	77.8	74.4	71.2	68.4	65.8	63.5	61.3	59.3	57.5	55.8	54.2	52.8	51.4	50.1	48.9	47.8	46.7	1600
1700	264.3	222.3	192.3	169.8	152.4	138.4	126.9	117.4	109.3	102.4	96.4	91.2	86.5	82.4	78.7	75.4	72.4	69.7	67.2	64.9	62.8	60.9	59.1	57.5	55.9	54.5	53.1	51.8	50.6	49.5	1700
1800	278.9	234.6	203.0	179.2	160.8	146.0	134.0	123.9	115.4	108.1	101.8	96.2	91.4	87.0	83.1	79.6	76.5	73.6	71.0	68.6	66.4	64.3	62.4	60.7	59.0	57.5	56.1	54.7	53.5	52.3	1800
Term. 2/	16.214	13.512	11.581	10.134	9.008	8.107	7.370	6.756	6.236	5.791	5.405	5.067	4.769	4.504	4.267	4.054	3.860	3.685	3.525	3.378	3.243	3.118	3.003	2.895	2.796	2.702	2.615	2.533	2.457	2.384	Term. 2/
L. H. 3/	.145910	.122817	.106321	.093950	.084328	.076630	.070332	.065083	.060642	.056836	.053537	.050650	.048103	.04 *39	.043813	.041990	.040340	.038841	.037472	.036217	.035062	.033996	.033009	.032093	.··1240	.030443	.029698	.089000	.028344	.027726	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.983. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload o, rating expenses. rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.63.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 25 (Concluded).--TERRITORY NO. 4 - TOTAL EASTERN, including New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20	2.9	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40	3.4	3.3	3.2	3.2	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60	3.9	3.8	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	2.9	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90	4.8	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.9	3.8	3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
120	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.2	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
140	6.1	6.0	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
160	6.7	6.5	6.4	6.2	6.1	6.0	5.9	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
180	7.2	7.0	6.9	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
200	7.7	7.6	7.4	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.2	6.1	6.0	6.0	5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
220	8.3	8.1	7.9	7.8	7.6	7.5	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
240	8.8	8.6	8.4	8.3	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
260	9.4	9.2	9.0	8.8	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.2	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
280	9.9	9.7	9.5	9.3	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.8	7.7	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
300	10.5	10.2	10.0	9.8	9.6	9.4	9.3	9.1	8.9	8.8	8.6	8.5	8.4	8.2	8.1	8.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
320	11.0	10.8	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.2	9.1	8.9	8.8	8.7	8.5	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
340	11.5	11.3	11.1	10.8	10.6	10.4	10.2	10.0	9.9	9.7	9.5	9.4	9.2	9.1	9.0	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
360	12.1	11.8	11.6	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.5	9.4	9.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
380	12.6	12.4	12.1	11.9	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	10.0	9.8	9.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
400	13.2	12.9	12.6	12.4	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.6	10.4	10.2	10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
420	13.7	13.4	13.1	12.9	12.6	12.4	12.2	11.9	11.7	11.5	11.4	11.2	11.0	10.8	10.7	10.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
440	14.3	14.0	13.7	13.4	13.1	12.9	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.3	11.1	11.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
460	14.8	14.5	14.2	13.9	13.6	13.4	13.1	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
480	15.3	15.0	14.7	14.4	14.1	13.9	13.6	13.4	13.1	12.9	12.7	12.5	12.3	12.1	12.0	11.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
500	15.9	15.5	15.2	14.9	14.6	14.4	14.1	13.9	13.6	13.4	13.2	13.0	12.8	12.6	12.4	12.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
600	18.6	18.2	17.8	17.5	17.1	16.8	16.5	16.2	16.0	15.7	15.4	15.2	15.0	14.8	14.5	14.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
700	21.3	20.9	20.4	20.0	19.7	19.3	19.0	18.6	18.3	18.0	17.7	17.4	17.2	16.9	16.7	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
800	24.0	23.5	23.1	22.6	22.2	21.8	21.4	21.0	20.7	20.3	20.0	19.7	19.4	19.1	18.8	18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
900	26.7	26.2	25.7	25.2	24.7	24.2	23.8	23.4	23.0	22.6	22.3	21.9	21.6	21.3	21.0	20.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
1000	29.5	28.8	28.3	27.7	27.2	26.7	26.2	25.8	25.3	24.9	24.5	24.2	23.8	23.5	23.1	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
1100	32.2	31.5	30.9	30.3	29.7	29.2	28.6	28.2	27.7	27.2	26.8	26.4	26.0	25.7	25.3	24.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
1200	34.9	34.2	33.5	32.8	32.2	31.6	31.1	30.5	30.0	29.6	29.1	28.7	28.2	27.8	27.4	27.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1300	37.6	36.8	36.1	35.4	34.7	34.1	33.5	32.9	32.4	31.9	31.4	30.9	30.4	30.0	29.6	29.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
1400	40.3	39.5	38.7	37.9	37.2	36.6	35.9	35.3	34.7	34.2	33.6	33.1	32.7	32.2	31.7	31.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1500	43.0	42.1	41.3	40.5	39.8	39.0	38.3	37.7	37.1	36.5	35.9	35.4	34.9	34.4	33.9	33.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
1600	45.7	44.8	43.9	43.1	42.3	41.5	40.8	40.1	39.4	38.8	38.2	37.6	37.1	36.5	36.0	35.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600
1700	48.5	47.5	46.5	45.6	44.8	44.0	43.2	42.5	41.8	41.1	40.5	39.9	39.3	38.7	38.2	37.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1700
1800	51.2	50.1	49.1	48.2	47.3	46.4	45.6	44.9	44.1	43.4	42.7	42.1	41.5	40.9	40.3	39.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800
Term. 2/	2.316	2.252	2.191	2.133	2.077	2.027	1.977	1.930	1.885	1.843	1.802	1.762	1.725	1.689	1.654	1.621	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.027144	.026594	.026074	.025582	.025114	.024670	.024248	.023845	.023462	.023095	.022746	.022411	.022090	.021783	.021489	.021206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.983. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.17.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.63.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 4 - Total Eastern, incl. N. E. & No. Ill.

STOCK CARS

TABLE 26.—TERRITORY NO. 4 - TOTAL EASTERN, including New England and Northern Illinois

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.7	17.3	14.8	13.0	11.6	10.4	9.5	8.7	8.0	7.5	7.0	6.5	6.2	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.8	3.6	3.5	-	-	-	-	10
20	22.1	18.5	15.9	13.9	12.4	11.1	10.1	9.3	8.6	8.0	7.5	7.0	6.6	6.3	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	-	-	-	-	20
30	23.5	19.6	16.9	14.8	13.2	11.9	10.8	9.9	9.2	8.5	8.0	7.5	7.1	6.7	6.4	6.0	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	-	-	-	-	30
40	24.9	20.8	17.8	15.7	14.0	12.6	11.5	10.6	9.8	9.1	8.5	8.0	7.5	7.1	6.8	6.4	6.2	5.9	5.6	5.4	5.2	5.0	4.9	4.7	4.5	4.4	-	-	-	-	40
50	26.3	22.0	18.9	16.6	14.8	13.3	12.2	11.2	10.3	9.6	9.0	8.5	8.0	7.6	7.2	6.9	6.5	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.7	-	-	-	-	50
60	27.7	23.2	19.9	17.5	15.6	14.1	12.8	11.8	10.9	10.2	9.5	9.0	8.5	8.0	7.6	7.3	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	-	-	-	-	60
70	29.1	24.3	20.9	18.4	16.4	14.8	13.5	12.4	11.5	10.7	10.0	9.4	8.9	8.5	8.0	7.7	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.3	-	-	-	-	70
80	30.5	25.5	21.9	19.3	17.2	15.5	14.2	13.0	12.1	11.3	10.6	9.9	9.4	8.9	8.5	8.1	7.7	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.6	-	-	-	-	80
90	31.9	26.7	23.0	20.2	18.0	16.3	14.8	13.7	12.7	11.8	11.1	10.4	9.8	9.3	8.9	8.5	8.1	7.8	7.4	7.2	6.9	6.7	6.4	6.2	6.0	5.9	-	-	-	-	90
100	33.3	27.8	24.0	21.1	18.8	17.0	15.5	14.3	13.2	12.3	11.6	10.9	10.3	9.8	9.3	8.9	8.5	8.1	7.8	7.5	7.2	7.0	6.8	6.5	6.3	6.2	-	-	-	-	100
120	36.0	30.2	26.0	22.9	20.4	18.5	16.9	15.5	14.4	13.4	12.6	11.9	11.2	10.6	10.1	9.7	9.3	8.9	8.5	8.2	7.9	7.6	7.4	7.2	6.9	6.7	-	-	-	-	120
140	38.8	32.5	28.0	24.6	22.0	19.9	18.2	16.8	15.6	14.5	13.6	12.8	12.1	11.5	11.0	10.5	10.0	9.6	9.2	8.9	8.6	8.3	8.0	7.8	7.5	7.3	-	-	-	-	140
160	41.6	34.9	30.0	26.4	23.6	21.4	19.5	18.0	16.7	15.6	14.6	13.8	13.1	12.4	11.8	11.3	10.8	10.4	10.0	9.6	9.3	8.9	8.7	8.4	8.1	7.9	-	-	-	-	160
180	44.4	37.2	32.1	28.2	25.2	22.8	20.9	19.3	17.9	16.7	15.7	14.8	14.0	13.3	12.7	12.1	11.6	11.1	10.7	10.3	9.9	9.6	9.3	9.0	8.7	8.5	-	-	-	-	180
200	47.2	39.5	34.1	30.0	26.9	24.3	22.2	20.5	19.0	17.8	16.7	15.7	14.9	14.2	13.5	12.9	12.3	11.9	11.4	11.0	10.6	10.3	9.9	9.6	9.3	9.1	-	-	-	-	200
220	49.9	41.9	36.1	31.8	28.5	25.8	23.6	21.7	20.2	18.9	17.7	16.7	15.8	15.0	14.3	13.7	13.1	12.6	12.1	11.7	11.3	10.9	10.6	10.2	9.9	9.7	-	-	-	-	220
240	52.7	44.2	38.2	33.6	30.1	27.2	24.9	23.0	21.4	20.0	18.7	17.7	16.8	15.9	15.2	14.5	13.9	13.3	12.8	12.4	12.0	11.6	11.2	10.9	10.5	10.3	-	-	-	-	240
260	55.5	46.6	40.2	35.4	31.7	28.7	26.3	24.2	22.5	21.0	19.8	18.7	17.7	16.8	16.0	15.3	14.7	14.1	13.6	13.1	12.6	12.2	11.8	11.5	11.1	10.8	-	-	-	-	260
280	58.3	48.9	42.2	37.2	33.3	30.2	27.6	25.5	23.7	22.1	20.8	19.6	18.6	17.7	16.9	16.1	15.4	14.8	14.3	13.8	13.3	12.9	12.5	12.1	11.8	11.4	-	-	-	-	280
300	61.1	51.2	44.2	39.0	34.9	31.6	29.0	26.7	24.8	23.2	21.8	20.6	19.5	18.6	17.7	16.9	16.2	15.6	15.0	14.5	14.0	13.5	13.1	12.7	12.4	12.0	-	-	-	-	300
320	63.8	53.6	46.3	40.8	36.5	33.1	30.3	28.0	26.0	24.3	22.8	21.6	20.4	19.4	18.5	17.7	17.0	16.3	15.7	15.2	14.6	14.2	13.7	13.3	13.0	12.6	-	-	-	-	320
340	66.6	55.9	48.3	42.6	38.1	34.6	31.6	29.2	27.2	25.4	23.9	22.5	21.4	20.3	19.4	18.5	17.8	17.1	16.4	15.9	15.3	14.8	14.4	13.9	13.6	13.2	-	-	-	-	340
360	69.4	58.3	50.3	44.4	39.7	36.0	33.0	30.5	28.3	26.5	24.9	23.5	22.3	21.2	20.2	19.3	18.5	17.8	17.2	16.6	16.0	15.5	15.0	14.6	14.2	13.8	-	-	-	-	360
380	72.2	60.6	52.4	46.2	41.3	37.5	34.3	31.7	29.5	27.6	25.9	24.5	23.2	22.1	21.1	20.1	19.3	18.6	17.9	17.2	16.7	16.1	15.6	15.2	14.8	14.4	-	-	-	-	380
400	75.0	63.0	54.4	48.0	42.9	38.9	35.7	32.9	30.6	28.7	26.9	25.4	24.1	22.9	21.9	20.9	20.1	19.3	18.6	17.9	17.3	16.8	16.3	15.8	15.4	14.9	-	-	-	-	400
420	77.7	65.3	56.4	49.7	44.6	40.4	37.0	34.2	31.8	29.7	28.0	26.4	25.0	23.8	22.7	21.7	20.9	20.1	19.3	18.6	18.0	17.4	16.9	16.4	16.0	15.5	-	-	-	-	420
440	80.5	67.6	58.4	51.5	46.2	41.9	38.4	35.4	33.0	30.8	29.0	27.4	26.0	24.7	23.6	22.6	21.6	20.8	20.0	19.3	18.7	18.1	17.5	17.0	16.6	16.1	-	-	-	-	440
460	83.3	70.0	60.5	53.3	47.8	43.3	39.7	36.7	34.1	31.9	30.0	28.4	26.9	25.6	24.4	23.4	22.4	21.5	20.8	20.0	19.4	18.7	18.2	17.7	17.2	16.7	-	-	-	-	460
480	86.1	72.3	62.5	55.1	49.4	44.8	41.0	37.9	35.3	33.0	31.0	29.3	27.8	26.5	25.3	24.2	23.2	22.3	21.5	20.7	20.0	19.4	18.8	18.3	17.8	17.3	-	-	-	-	480
500	88.9	74.7	64.5	56.9	51.0	46.3	42.4	39.2	36.4	34.1	32.1	30.3	28.7	27.3	26.1	25.0	24.0	23.0	22.2	21.4	20.7	20.1	19.4	18.9	18.4	17.9	-	-	-	-	500
600	102.8	86.4	74.7	65.9	59.0	53.6	49.1	45.4	42.2	39.5	37.2	35.1	33.3	31.7	30.3	29.0	27.8	26.8	25.8	24.9	24.1	23.3	22.6	22.0	21.4	20.8	-	-	-	-	600
700	116.7	98.1	84.8	74.8	67.1	60.9	55.8	51.6	48.0	45.0	42.3	40.0	37.9	36.1	34.5	33.0	31.7	30.5	29.4	28.4	27.4	26.6	25.8	25.1	24.4	23.7	-	-	-	-	700
800	130.6	109.8	94.9	83.8	75.1	68.2	62.6	57.8	53.8	50.4	47.4	44.8	42.5	40.5	38.7	37.0	35.6	34.2	33.0	31.9	30.8	29.9	29.0	28.1	27.4	26.7	-	-	-	-	800
900	144.5	121.5	105.1	92.8	83.2	75.5	69.3	64.0	59.6	55.8	52.6	49.7	47.2	44.9	42.9	41.1	39.4	37.9	36.6	35.3	34.2	33.1	32.1	31.2	30.4	29.6	-	-	-	-	900
1000	158.4	133.2	115.2	103.7	91.2	82.9	76.0	70.3	65.4	61.3	57.7	54.5	51.8	49.3	47.1	45.1	43.3	41.7	40.2	38.8	37.6	36.4	35.3	34.3	33.4	32.5	-	-	-	-	1000
1100	172.3	144.9	125.4	110.7	99.3	90.2	82.7	76.5	71.2	66.7	62.8	59.4	56.4	53.7	51.3	49.1	47.2	45.4	43.8	42.3	40.9	39.7	38.5	37.4	36.4	35.4	-	-	-	-	1100
1200	186.2	156.6	135.5	119.7	107.3	97.5	89.4	82.7	77.0	72.2	67.9	64.2	61.0	58.1	55.5	53.2	51.0	49.1	47.4	45.8	44.3	42.9	41.7	40.5	39.4	38.4	-	-	-	-	1200
1300	200.1	168.3	145.6	128.6	115.4	104.8	96.1	88.9	82.8	77.6	73.1	69.1	65.6	62.5	59.7	57.2	54.9	52.9	51.0	49.2	47.7	46.2	44.8	43.6	42.4	41.3	-	-	-	-	1300
1400	214.0	180.0	155.8	137.6	123.4	112.1	102.9	95.2	88.6	83.0	78.2	73.9	70.2	66.9	63.9	61.2	58.8	56.6	54.6	52.7	51.0	49.5	48.0	46.7	45.4	44.2	-	-	-	-	1400
1500	227.9	191.7	165.9	146.5	131.5	119.4	109.6	101.4	94.4	88.5	83.3	78.8	74.8	71.3	68.1	65.2	62.7	60.3	58.2	56.2	54.4	52.7	51.2	49.7	48.4	47.2	-	-	-	-	1500
1600	241.8	203.4	176.0	155.5	139.5	126.8	116.3	107.6	100.2	93.9	88.4	83.6	79.4	75.6	72.3	69.3	66.5	64.0	61.8	59.7	57.8	56.0	54.4	52.8	51.4	50.1	-	-	-	-	1600
1700	255.7	215.1	186.2	164.5	147.6	134.1	123.0	113.8	106.0	99.3	93.5	88.5	84.0	80.0	76.5	73.3	70.4	67.8	65.4	63.2	61.1	59.3	57.5	55.9	54.4	53.0	-	-	-	-	1700
1800	269.6	226.8	196.3	173.4	155.6	141.4	129.7	120.0	111.8	104.8	98.7	93.3	88.6	84.4	80.7	77.3	74.3	71.5	69.0	66.6	64.5	62.5	60.7	59.0	57.4	56.0	-	-	-	-	1800
Term. 2/	19.356	16.130	13.826	12.098	10.753	9.678	8.798	8.065	7.445	6.913	6.452	6.049	5.693	5.377	5.094	4.839	4.609	4.399	4.208	4.033	3.871	3.722	3.584	3.456	3.337	3.226	-	-	-	-	Term. 2/
L. H. 3/	.139000	.117058	.101386	.089631	.080489	.073175	.067191	.062204	.057985	.054368	.051233	.048491	.046071	.043919	.041995	.040263	.038695	.037270	.035970	.034777	.033680	.032667	.031730	.030859	.030048	.029292	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 20.9 tons and a ratio of empty car miles to loaded car miles of 1.005. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.63.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scales.

TABLE 27.—TERRITORY NO. 4 - TOTAL EASTERN, including New England and Northern Illinois

Territory No. 4 - Total Eastern, incl. N. E. & No. Ill.

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.8	14.9	12.8	11.2	9.9	9.0	8.1	7.5	6.9	6.4	6.0	5.6	5.3	5.0	4.7	4.5	4.3	4.1	3.9	3.8	3.6	3.5	3.4	3.2	3.1	3.0	-	-	-	-	10
20	19.4	16.2	13.9	12.2	10.9	9.8	8.9	8.2	7.6	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.2	4.0	3.9	3.7	3.6	3.5	3.4	-	-	-	-	20
30	21.1	17.6	15.1	13.2	11.8	10.6	9.7	8.9	8.2	7.7	7.2	6.7	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	-	-	-	-	30
40	22.7	18.9	16.3	14.3	12.7	11.5	10.5	9.6	8.9	8.3	7.8	7.3	6.9	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.2	4.0	-	-	-	-	40
50	24.3	20.3	17.5	15.3	13.7	12.3	11.2	10.3	9.6	8.9	8.3	7.8	7.4	7.0	6.7	6.3	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.4	-	-	-	-	50
60	25.9	21.7	18.6	16.4	14.6	13.2	12.0	11.1	10.2	9.5	8.9	8.4	7.9	7.5	7.1	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.2	5.0	4.8	4.7	-	-	-	-	60
70	27.5	23.0	19.8	17.4	15.5	14.0	12.8	11.8	10.9	10.2	9.5	9.0	8.5	8.0	7.6	7.3	6.9	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.2	5.0	-	-	-	-	70
80	29.1	24.4	21.0	18.4	16.4	14.9	13.6	12.5	11.6	10.8	10.1	9.5	9.0	8.5	8.1	7.7	7.4	7.1	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.3	-	-	-	-	80
90	30.7	25.7	22.2	19.5	17.4	15.7	14.3	13.2	12.2	11.4	10.7	10.1	9.5	9.0	8.6	8.2	7.8	7.5	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.7	-	-	-	-	90
100	32.4	27.1	23.3	20.5	18.3	16.5	15.1	13.9	12.9	12.0	11.3	10.6	10.0	9.5	9.1	8.6	8.3	7.9	7.6	7.3	7.1	6.8	6.6	6.4	6.2	6.0	-	-	-	-	100
120	35.6	29.8	25.7	22.6	20.2	18.2	16.7	15.3	14.2	13.3	12.5	11.7	11.1	10.5	10.0	9.6	9.1	8.8	8.4	8.1	7.8	7.6	7.3	7.1	6.9	6.7	-	-	-	-	120
140	38.5	32.5	28.0	24.7	22.0	19.9	18.2	16.8	15.6	14.5	13.6	12.8	12.1	11.5	11.0	10.5	10.0	9.6	9.2	8.9	8.6	8.3	8.0	7.8	7.5	7.3	-	-	-	-	140
160	42.1	35.2	30.4	26.7	23.9	21.6	19.8	18.2	16.9	15.8	14.8	14.0	13.2	12.5	11.9	11.4	10.9	10.5	10.1	9.7	9.4	9.0	8.7	8.5	8.2	8.0	-	-	-	-	160
180	45.3	38.0	32.7	28.8	25.7	23.3	21.3	19.6	18.2	17.0	16.0	15.1	14.3	13.5	12.9	12.3	11.8	11.3	10.9	10.5	10.1	9.8	9.5	9.2	8.9	8.6	-	-	-	-	180
200	48.5	40.7	35.1	30.9	27.6	25.0	22.9	21.1	19.6	18.3	17.2	16.2	15.3	14.5	13.9	13.2	12.7	12.2	11.7	11.3	10.9	10.5	10.2	9.9	9.6	9.3	-	-	-	-	200
220	51.7	43.4	37.4	32.9	29.5	26.7	24.4	22.5	20.9	19.5	18.3	17.3	16.4	15.5	14.8	14.1	13.6	13.0	12.5	12.1	11.6	11.3	10.9	10.6	10.3	10.0	-	-	-	-	220
240	55.0	46.1	39.8	35.0	31.3	28.4	26.0	23.9	22.2	20.8	19.5	18.4	17.4	16.5	15.8	15.1	14.4	13.9	13.3	12.8	12.4	12.0	11.6	11.3	10.9	10.6	-	-	-	-	240
260	58.2	48.8	42.1	37.1	33.2	30.1	27.5	25.4	23.6	22.0	20.7	19.5	18.5	17.5	16.7	16.0	15.3	14.7	14.1	13.6	13.2	12.7	12.3	12.0	11.6	11.3	-	-	-	-	260
280	61.4	51.5	44.3	39.2	35.0	31.7	29.0	26.8	24.9	23.3	21.9	20.6	19.5	18.6	17.7	16.9	16.2	15.6	15.0	14.4	13.9	13.5	13.1	12.7	12.3	12.0	-	-	-	-	280
300	64.7	54.3	46.8	41.2	36.9	33.4	30.6	28.2	26.2	24.5	23.0	21.7	20.6	19.6	18.6	17.8	17.1	16.4	15.8	15.2	14.7	14.2	13.8	13.4	13.0	12.6	-	-	-	-	300
320	67.9	57.0	49.2	43.3	38.8	35.1	32.1	29.7	27.6	25.8	24.2	22.8	21.6	20.6	19.6	18.7	18.0	17.2	16.6	16.0	15.5	15.0	14.5	14.1	13.7	13.3	-	-	-	-	320
340	71.1	59.7	51.5	45.4	40.6	36.8	33.7	31.1	28.9	27.0	25.4	23.9	22.7	21.6	20.6	19.7	18.8	18.1	17.4	16.8	16.2	15.7	15.2	14.8	14.3	13.9	-	-	-	-	340
360	74.4	62.4	53.9	47.5	42.5	38.5	35.2	32.5	30.2	28.3	26.5	25.1	23.7	22.6	21.5	20.6	19.7	18.9	18.2	17.6	17.0	16.4	15.9	15.5	15.0	14.6	-	-	-	-	360
380	77.6	65.1	56.2	49.5	44.3	40.2	36.8	34.0	31.6	29.5	27.7	26.2	24.8	23.6	22.5	21.5	20.6	19.8	19.1	18.4	17.8	17.2	16.6	16.1	15.7	15.3	-	-	-	-	380
400	80.8	67.8	58.6	51.6	46.2	41.9	38.3	35.4	32.9	30.8	28.9	27.3	25.8	24.6	23.4	22.4	21.5	20.6	19.9	19.2	18.5	17.9	17.4	16.8	16.4	15.9	-	-	-	-	400
420	84.0	70.6	60.9	53.7	48.1	43.6	39.9	36.8	34.2	32.0	30.1	28.4	26.9	25.6	24.4	23.3	22.4	21.5	20.7	20.0	19.3	18.7	18.1	17.5	17.0	16.6	-	-	-	-	420
440	87.3	73.3	63.3	55.8	49.9	45.3	41.4	38.3	35.6	33.2	31.2	29.5	28.0	26.6	25.4	24.2	23.2	22.3	21.5	20.7	20.0	19.4	18.8	18.2	17.7	17.2	-	-	-	-	440
460	90.5	76.0	65.6	57.8	51.8	46.9	43.0	39.7	36.9	34.5	32.4	30.6	29.0	27.6	26.3	25.2	24.1	23.2	22.3	21.5	20.8	20.1	19.5	18.9	18.4	17.9	-	-	-	-	460
480	93.7	78.7	68.0	59.9	53.6	48.6	44.5	41.1	38.2	35.7	33.6	31.7	30.1	28.6	27.3	26.1	25.0	24.0	23.1	22.3	21.6	20.9	20.2	19.6	19.1	18.6	-	-	-	-	480
500	97.0	81.4	70.3	62.0	55.5	50.3	46.1	42.5	39.6	37.0	34.8	32.8	31.1	29.6	28.2	27.0	25.9	24.9	24.0	23.1	22.3	21.6	21.0	20.3	19.8	19.2	-	-	-	-	500
600	113.1	95.0	82.1	72.4	64.8	58.8	53.8	49.7	46.2	43.2	40.6	38.4	36.4	34.6	33.0	31.6	30.3	29.1	28.0	27.1	26.2	25.3	24.5	23.8	23.2	22.5	-	-	-	-	600
700	129.3	108.6	93.8	82.7	74.1	67.2	61.6	56.9	52.9	49.5	46.5	43.9	41.7	39.6	37.8	36.2	34.7	33.4	32.1	31.0	30.0	29.0	28.1	27.3	26.5	25.8	-	-	-	-	700
800	145.4	122.2	105.5	93.1	83.4	75.6	69.3	64.0	59.5	55.7	52.4	49.5	46.9	44.6	42.6	40.8	39.1	37.6	36.2	35.0	33.8	32.7	31.7	30.8	29.9	29.1	-	-	-	-	800
900	161.6	135.7	117.3	103.5	92.7	84.1	77.0	71.2	66.2	62.0	58.3	55.0	52.2	49.7	47.4	45.4	43.5	41.8	40.3	38.9	37.6	36.4	35.3	34.3	33.3	32.4	-	-	-	-	900
1000	177.7	149.3	129.0	113.8	102.0	92.5	84.8	78.3	72.9	68.2	64.1	60.6	57.5	54.7	52.2	49.9	47.9	46.1	44.4	42.8	41.4	40.1	38.9	37.8	36.7	35.7	-	-	-	-	1000
1100	193.9	162.9	140.8	124.2	111.3	101.0	92.5	85.5	79.5	74.4	70.0	66.1	62.7	59.7	57.0	54.5	52.3	50.3	48.5	46.8	45.2	43.8	42.5	41.3	40.1	39.0	-	-	-	-	1100
1200	210.0	176.5	152.5	134.6	120.6	109.4	100.3	92.7	86.2	80.7	75.9	71.7	68.0	64.7	61.8	59.1	56.7	54.5	52.6	50.7	49.1	47.5	46.1	44.7	43.5	42.4	-	-	-	-	1200
1300	226.2	190.1	164.3	144.9	129.9	117.9	108.0	99.8	92.9	86.9	81.8	77.2	73.3	69.7	66.6	63.7	61.1	58.8	56.6	54.7	52.9	51.2	49.7	48.2	46.9	45.7	-	-	-	-	1300
1400	242.3	203.6	176.0	155.3	139.2	126.3	115.8	107.0	99.5	93.2	87.6	82.8	78.5	74.7	71.3	68.3	65.5	63.0	60.7	58.6	56.7	54.9	53.3	51.7	50.3	49.0	-	-	-	-	1400
1500	258.5	217.2	187.8	165.7	148.5	134.7	123.5	114.1	106.2	99.4	93.5	88.4	83.8	79.8	76.1	72.9	69.9	67.3	64.8	62.6	60.5	58.6	56.8	55.2	53.7	52.3	-	-	-	-	1500
1600	274.6	230.8	199.5	176.0	157.8	143.2	131.2	121.3	112.9	105.6	99.4	93.9	89.1	84.8	80.9	77.5	74.3	71.5	68.9	66.5	64.3	62.3	60.4	58.7	57.1	55.6	-	-	-	-	1600
1700	290.8	244.4	211.3	186.4	167.1	151.6	139.0	128.4	119.5	111.9	105.3	99.5	94.3	89.8	85.7	82.1	78.7	75.7	73.0	70.5	68.1	66.0	64.0	62.2	60.5	58.9	-	-	-	-	1700
1800	306.9	258.0	223.0	196.8	176.4	160.1	146.7	135.6	126.2	118.1	111.1	105.0	99.6	94.8	90.5	86.7	83.2	80.0	77.1	74.4	72.0	69.7	67.6	65.7	63.9	62.2	-	-	-	-	1800
Term. 2/	16.214	13.512	11.581	10.134	9.008	8.107	7.370	6.756	6.236	5.791	5.405	5.067	4.769	4.504	4.267	4.054	3.860	3.685	3.525	3.378	3.243	3.118	3.003	2.895	2.796	2.702	-	-	-	-	Term. 2/
L. H. 3/	.161500	.135808	.117457	.103694	.092989	.084425	.077418	.071579	.066638	.062404	.058733	.055522	.052688	.050169	.047916	.045888	.044052	.042384	.040861	.039465	.038180	.036994	.035896	.034877	.033928	.033042	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.867. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.14.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.63.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 4 - Total Eastern, incl. N. E. & No. Ill.

LESS-CARLOAD

TABLE 28.--TERRITORY NO. 4 - TOTAL EASTERN, including New England and Northern Illinois

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	87.4	67.5	57.4	51.3	47.2	44.3	42.1	40.4	39.1	38.0	37.1	36.3	35.6	35.0	34.5	34.1	33.7	33.3	33.0	32.7	32.4	32.2	32.0	31.8	31.6	31.4	31.3	31.1	31.0	10
20	93.4	71.3	60.2	53.6	49.2	46.0	43.7	41.8	40.4	39.2	38.1	37.3	36.6	35.9	35.4	34.9	34.5	34.1	33.7	33.4	33.1	32.9	32.6	32.4	32.2	32.0	31.8	31.7	31.5	20
30	98.9	75.0	63.1	55.9	51.2	47.8	45.2	43.2	41.6	40.3	39.2	38.3	37.5	36.9	36.3	35.7	35.3	34.8	34.5	34.1	33.8	33.5	33.3	33.0	32.8	32.6	32.4	32.2	32.1	30
40	104.5	78.8	66.0	58.3	53.2	49.5	46.7	44.6	42.9	41.5	40.3	39.3	38.5	37.8	37.1	36.6	36.1	35.6	35.2	34.8	34.5	34.2	33.9	33.7	33.4	33.2	33.0	32.8	32.6	40
50	110.0	82.6	68.9	60.6	55.1	51.2	48.3	46.0	44.2	42.7	41.4	40.4	39.5	38.7	38.0	37.4	36.8	36.4	35.9	35.5	35.2	34.9	34.6	34.3	34.0	33.8	33.6	33.4	33.2	50
60	115.6	86.3	71.7	63.0	57.1	52.9	49.8	47.4	45.4	43.8	42.5	41.4	40.4	39.6	38.9	38.2	37.6	37.1	36.7	36.2	35.9	35.5	35.2	34.9	34.6	34.4	34.2	33.9	33.7	60
70	121.1	90.1	74.6	65.3	59.1	54.7	51.4	48.8	46.7	45.0	43.6	42.4	41.4	40.5	39.7	39.0	38.4	37.9	37.4	37.0	36.6	36.2	35.8	35.5	35.2	35.0	34.7	34.5	34.3	70
80	126.7	93.9	77.5	67.6	61.1	56.4	52.9	50.2	48.0	46.2	44.7	43.4	42.3	41.4	40.6	39.9	39.2	38.6	38.1	37.7	37.2	36.8	36.5	36.2	35.9	35.6	35.3	35.1	34.9	80
90	132.2	97.6	80.4	70.0	63.1	58.1	54.4	51.5	49.2	47.4	45.8	44.4	43.3	42.3	41.5	40.7	40.0	39.4	38.9	38.4	37.9	37.5	37.1	36.8	36.5	36.2	35.9	35.6	35.4	90
100	137.8	101.4	83.2	72.3	65.1	59.9	56.0	52.9	50.5	48.5	46.9	45.5	44.3	43.2	42.3	41.5	40.8	40.2	39.6	39.1	38.6	38.2	37.8	37.4	37.1	36.8	36.5	36.2	36.0	100
120	148.9	108.9	89.0	77.0	69.0	63.3	59.0	55.7	53.0	50.9	49.0	47.5	46.2	45.1	44.1	43.2	42.4	41.7	41.1	40.5	40.0	39.5	39.1	38.7	38.3	38.0	37.6	37.3	37.1	120
140	160.0	116.5	94.7	81.7	73.0	66.8	62.1	58.5	55.6	53.2	51.2	49.6	48.1	46.9	45.8	44.8	44.0	43.2	42.5	41.9	41.3	40.8	40.4	39.9	39.5	39.1	38.8	38.5	38.2	140
160	171.1	124.0	100.5	86.4	76.9	70.2	65.2	61.3	58.1	55.6	53.4	51.6	50.0	48.7	47.5	46.5	45.6	44.7	44.0	43.3	42.7	42.2	41.6	41.2	40.7	40.3	40.0	39.6	39.3	160
180	182.2	131.6	106.2	91.0	80.9	73.7	68.3	64.0	60.7	57.9	55.6	53.6	52.0	50.5	49.3	48.1	47.2	46.3	45.5	44.7	44.1	43.5	42.9	42.4	42.0	41.5	41.1	40.7	40.4	180
200	193.3	139.1	112.0	95.7	84.9	77.1	71.3	66.8	63.2	60.2	57.8	55.7	53.9	52.4	51.0	49.8	48.7	47.8	46.9	46.2	45.5	44.8	44.2	43.7	43.2	42.7	42.3	41.9	41.5	200
220	204.4	146.6	117.7	100.4	88.8	80.6	74.4	69.6	65.7	62.6	60.0	57.7	55.8	54.2	52.7	51.5	50.3	49.3	48.4	47.6	46.8	46.1	45.5	44.9	44.4	43.9	43.4	43.0	42.6	220
240	215.5	154.2	123.5	105.1	92.8	84.0	77.5	72.4	68.3	64.9	62.1	60.0	57.8	56.0	54.5	53.1	51.9	50.8	49.9	49.0	48.2	47.5	46.8	46.2	45.6	45.1	44.6	44.2	43.7	240
260	226.6	161.7	129.2	109.8	96.8	87.5	80.5	75.1	70.8	67.3	64.3	61.8	59.7	57.8	56.2	54.8	53.5	52.4	51.3	50.4	49.6	48.8	48.1	47.4	46.8	46.3	45.8	45.3	44.8	260
280	237.7	169.2	135.0	114.4	100.7	91.0	83.6	77.9	73.3	69.6	66.5	63.9	61.6	59.6	57.9	56.4	55.1	53.9	52.8	51.8	50.9	50.1	49.4	48.7	48.1	47.5	46.9	46.4	45.9	280
300	248.8	176.5	140.7	119.1	104.7	94.4	86.7	80.7	75.9	72.0	68.7	65.9	63.5	61.5	59.7	58.1	56.7	55.4	54.3	53.2	52.3	51.4	50.7	49.9	49.3	48.7	48.1	47.6	47.1	300
320	259.9	184.3	146.5	123.8	108.7	97.9	89.8	83.5	78.4	74.3	70.9	67.9	65.5	63.3	61.4	59.7	58.2	56.9	55.7	54.6	53.7	52.8	52.0	51.2	50.5	49.8	49.2	48.7	48.2	320
340	271.0	191.8	152.2	128.5	112.6	101.3	92.8	86.2	81.0	76.6	73.0	70.0	67.4	65.1	63.1	61.4	59.8	58.4	57.2	56.1	55.0	54.1	53.2	52.4	51.7	51.0	50.4	49.8	49.3	340
360	282.2	199.4	158.0	133.2	116.6	104.8	95.9	89.0	83.5	79.0	75.2	72.0	69.3	66.9	64.9	63.0	61.4	60.0	58.7	57.5	56.4	55.4	54.5	53.7	52.9	52.2	51.6	51.0	50.4	360
380	293.3	206.9	163.7	137.8	120.6	108.2	99.0	91.8	86.0	81.3	77.4	74.1	71.2	68.8	66.6	64.7	63.0	61.5	60.1	58.9	57.7	56.7	55.8	55.0	54.1	53.4	52.7	52.1	51.5	380
400	304.4	214.4	169.5	142.5	124.5	111.7	102.1	94.6	88.6	83.7	79.6	76.1	73.2	70.6	68.3	66.4	64.6	63.0	61.6	60.3	59.1	58.1	57.1	56.2	55.4	54.6	53.9	53.2	52.6	400
420	315.5	222.0	175.2	147.2	128.5	115.1	105.1	97.3	91.1	86.0	81.8	78.2	75.1	72.4	70.1	68.0	66.2	64.5	63.1	61.7	60.5	59.4	58.4	57.5	56.6	55.8	55.0	54.4	53.7	420
440	326.6	229.5	181.0	151.9	132.5	118.6	108.2	100.1	93.6	88.4	83.9	80.2	77.0	74.2	71.8	69.7	67.8	66.1	64.5	63.1	61.9	60.7	59.7	58.7	57.8	57.0	56.2	55.5	54.8	440
460	337.7	237.0	186.7	156.6	136.4	122.1	111.3	102.9	96.2	90.7	86.1	82.2	78.9	76.1	73.5	71.3	69.3	67.6	66.0	64.6	63.3	62.1	61.0	60.0	59.0	58.2	57.4	56.6	55.9	460
480	348.8	244.6	192.5	161.2	140.4	125.5	114.4	105.7	98.7	93.0	88.3	84.3	80.9	77.9	75.3	73.0	70.9	69.1	67.5	66.0	64.6	63.4	62.3	61.2	60.2	59.4	58.5	57.8	57.0	480
500	359.9	252.1	198.2	165.9	144.4	129.0	117.4	108.4	101.3	95.4	90.5	86.3	82.8	79.7	77.0	74.6	72.5	70.6	68.9	67.4	66.0	64.7	63.5	62.5	61.5	60.5	59.7	58.9	58.2	500
600	415.4	289.8	227.0	189.3	164.2	146.2	132.6	122.3	113.9	107.1	101.4	96.6	92.4	88.8	85.7	82.9	80.4	78.2	76.3	74.5	72.8	71.3	70.0	68.7	67.6	66.5	65.5	64.6	63.7	600
700	470.9	327.5	255.8	212.7	184.0	163.5	148.2	136.2	126.6	118.8	112.3	106.8	102.0	97.9	94.4	91.2	88.4	85.9	83.6	81.5	79.7	78.0	76.4	75.0	73.7	72.4	71.3	70.2	69.3	700
800	526.5	365.1	284.5	236.1	203.8	180.8	163.5	150.1	139.3	130.5	123.2	117.0	111.7	107.1	103.0	99.5	96.3	93.5	90.9	88.6	86.5	84.6	82.9	81.3	79.8	78.4	77.1	75.9	74.8	800
900	582.0	402.8	313.3	259.5	223.7	198.1	178.9	163.9	152.0	142.2	134.1	127.2	121.3	116.2	111.7	107.7	104.2	101.1	98.3	95.7	93.4	91.2	89.3	87.5	85.9	84.3	82.9	81.6	80.3	900
1000	637.5	440.5	342.0	282.9	243.5	215.4	194.3	177.8	164.7	154.0	145.0	137.4	130.9	125.3	120.4	116.0	112.2	108.7	105.6	102.8	100.2	97.9	95.8	93.8	92.0	90.3	88.7	87.3	85.9	1000
1100	693.1	478.2	370.8	306.3	263.3	232.6	209.6	191.7	177.4	165.7	155.9	147.6	140.6	134.4	129.0	124.3	120.1	116.3	112.9	109.9	107.1	104.5	102.2	100.0	98.0	96.2	94.5	92.9	91.4	1100
1200	748.6	515.8	399.5	329.7	283.2	249.9	225.0	205.6	190.1	177.4	166.8	157.8	150.2	143.5	137.7	132.6	128.0	123.9	120.3	116.9	113.9	111.1	108.6	106.3	104.1	102.2	100.3	98.6	97.0	1200
1300	804.1	553.5	428.3	353.1	303.0	267.2	240.4	219.5	202.8	189.1	177.7	168.1	159.8	152.6	146.4	140.9	135.9	131.6	127.6	124.0	120.8	117.8	115.1	112.6	110.2	108.1	106.1	104.3	102.5	1300
1400	859.6	591.2	457.0	376.5	322.8	284.5	255.7	233.3	215.5	200.8	188.6	178.3	169.4	161.8	155.1	149.1	143.9	139.2	134.9	131.1	127.6	124.4	121.5	118.8	116.3	114.0	111.9	109.9	108.1	1400
1500	915.2	628.9	485.8	399.9	342.6	301.7	271.1	247.2	228.1	212.5	199.5	188.5	179.1	170.9	163.7	157.4	151.8	146.8	142.3	138.2	134.5	131.1	128.9	125.1	122.4	120.0	117.7	115.6	113.6	1500
1600	970.7	666.6	514.5	423.3	362.5	319.0	286.5	261.1	240.8	224.2	210.4	198.7	188.7	180.0	172.4	165.7	159.7	154.4	149.6	145.2	141.3	137.7	134.4	131.3	128.5	125.9	123.5	121.3	119.2	1600
1700	1026.2	704.2	543.3	446.7	382.3	336.3	301.8	275.0	253.5	235.9	221.3	208.9	198.3	189.1	181.1	174.0	167.7	162.0	156.9	152.3	148.1	144.3	140.8	137.6	134.6	131.9	129.3	126.9	124.7	1700
1800	1081.8	741.9	572.0	470.1	402.1	353.6	317.2	288.8	266.2	247.7	232.2	219.1	207.9	198.2	189.8	182.2	175.6	169.6	164.3	159.4	155.0	151.0	147.3	143.9	140.7	137.8	135.1	132.6	130.3	1800
Term. 2/	82.250	63.735	54.480	48.925	45.225	42.580	40.595	39.050	37.820	36.810	35.965	35.255	34.645	34.115	33.655	33.245	32.880	32.555	32.265	32.000	31.760	31.540	31.340	31.155	30.980	30.825	30.675	30.540	30.415	Term. 2/
L. H. 3/	.55528	.37676	.28753	.23397	.19828	.17277	.15366	.13877	.12688	.11714	.10903	.10216	.09628	.09118	.08672	.08278	.07928	.07615	.07333	.07078	.06846	.06634	.06441	.06262	.06097	.05944	.05803	.05671	.05548	L. H. 3/

1/ Based on a tare weight of 23.0 tons and a ratio of empty car miles to loaded car miles of 0.340. The Less-carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.
For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.21.
For Cost Level III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.31.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 5 - Pocahontas

BOX CARS

TABLE 29.—TERRITORY NO. 5 - POCAHONTAS

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.0	14.2	12.1	10.6	9.5	8.5	7.7	7.1	6.6	6.1	5.7	5.3	5.0	4.8	4.5	4.7	4.1	3.9	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.5	10
20	17.7	14.8	12.7	11.1	9.9	8.9	8.1	7.5	6.9	6.4	6.0	5.6	5.3	5.0	4.7	4.5	4.3	4.1	3.9	3.8	3.6	3.5	3.4	3.3	3.1	3.0	3.0	2.9	2.8	2.7	20
30	18.5	15.4	13.3	11.6	10.3	9.3	8.5	7.8	7.2	6.7	6.3	5.9	5.6	5.3	5.0	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	30
40	19.3	16.1	13.8	12.1	10.8	9.7	8.9	8.1	7.5	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.8	4.5	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	40
50	20.0	16.7	14.4	12.6	11.2	10.1	9.2	8.5	7.9	7.3	6.9	6.4	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	50
60	20.8	17.4	14.9	13.1	11.7	10.5	9.6	8.8	8.2	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	3.3	60
70	21.5	18.0	15.5	13.6	12.1	11.0	10.0	9.2	8.5	7.9	7.4	7.0	6.6	6.3	5.9	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	70
80	22.3	18.6	16.0	14.1	12.6	11.4	10.4	9.5	8.8	8.2	7.7	7.3	6.9	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9	3.7	3.7	80
90	23.0	19.3	16.6	14.6	13.0	11.8	10.7	9.9	9.2	8.5	8.0	7.5	7.1	6.8	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.1	4.0	3.9	3.8	90
100	23.8	19.9	17.1	15.1	13.5	12.2	11.1	10.2	9.5	8.8	8.3	7.8	7.4	7.0	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	4.1	4.0	100
120	25.3	21.2	18.3	16.1	14.3	13.0	11.9	10.9	10.1	9.5	8.9	8.4	7.9	7.5	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.4	4.3	120
140	26.8	22.5	19.4	17.0	15.2	13.8	12.6	11.6	10.8	10.1	9.5	8.9	8.4	8.0	7.6	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.8	4.7	4.6	140
160	28.3	23.8	20.5	18.0	16.1	14.6	13.4	12.3	11.4	10.7	10.0	9.5	9.0	8.5	8.1	7.7	7.4	7.1	6.8	6.6	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.0	4.9	160
180	29.8	25.0	21.6	19.0	17.0	15.4	14.1	13.0	12.1	11.3	10.6	10.0	9.5	9.0	8.6	8.2	7.9	7.5	7.3	7.0	6.8	6.5	6.3	6.1	6.0	5.8	5.6	5.5	5.4	5.2	180
200	31.4	26.3	22.7	20.0	17.9	16.2	14.9	13.7	12.7	11.9	11.2	10.6	10.0	9.5	9.1	8.7	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.1	6.0	5.8	5.7	5.5	200
220	32.9	27.6	23.8	21.0	18.8	17.0	15.6	14.4	13.4	12.5	11.8	11.1	10.5	10.0	9.5	9.1	8.7	8.4	8.1	7.8	7.5	7.3	7.1	6.9	6.7	6.5	6.3	6.2	6.0	5.9	220
240	34.4	28.9	24.9	22.0	19.7	17.8	16.3	15.1	14.0	13.1	12.3	11.7	11.0	10.5	10.0	9.6	9.2	8.8	8.5	8.2	7.9	7.7	7.4	7.2	7.0	6.8	6.7	6.5	6.3	6.2	240
260	35.9	30.1	26.0	23.0	20.6	18.7	17.1	15.8	14.7	13.7	12.9	12.2	11.6	11.0	10.5	10.0	9.6	9.3	8.9	8.6	8.3	8.1	7.8	7.6	7.4	7.2	7.0	6.8	6.7	6.5	260
280	37.4	31.4	27.2	24.0	21.5	19.5	17.8	16.5	15.3	14.3	13.5	12.7	12.1	11.5	11.0	10.5	10.1	9.7	9.3	9.0	8.7	8.4	8.2	7.9	7.7	7.5	7.3	7.1	7.0	6.8	280
300	38.9	32.7	28.3	24.9	22.4	20.3	18.6	17.2	16.0	15.0	14.1	13.3	12.6	12.0	11.5	11.0	10.5	10.1	9.8	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.3	7.1	300
320	40.4	34.0	29.4	25.9	23.2	21.1	19.3	17.9	16.6	15.6	14.6	13.8	13.1	12.5	11.9	11.4	11.0	10.5	10.2	9.8	9.5	9.2	8.9	8.7	8.4	8.2	8.0	7.8	7.6	7.4	320
340	41.9	35.3	30.5	26.9	24.1	21.9	20.1	18.6	17.3	16.2	15.2	14.4	13.7	13.0	12.4	11.9	11.4	11.0	10.6	10.2	9.9	9.6	9.3	9.0	8.8	8.5	8.3	8.1	7.9	7.8	340
360	43.5	36.5	31.6	27.9	25.0	22.7	20.8	19.3	17.9	16.8	15.8	14.9	14.2	13.5	12.9	12.3	11.9	11.4	11.0	10.6	10.3	10.0	9.7	9.4	9.1	8.9	8.7	8.5	8.3	8.1	360
380	45.0	37.8	32.7	28.9	25.9	23.5	21.6	20.0	18.6	17.4	16.4	15.5	14.7	14.0	13.4	12.8	12.3	11.8	11.4	11.0	10.7	10.3	10.0	9.7	9.5	9.2	9.0	8.8	8.6	8.4	380
400	46.5	39.1	33.8	29.9	26.8	24.3	22.3	20.6	19.2	18.0	17.0	16.0	15.2	14.5	13.9	13.3	12.7	12.3	11.8	11.4	11.1	10.7	10.4	10.1	9.8	9.6	9.3	9.1	8.9	8.7	400
420	48.0	40.4	34.9	30.9	27.7	25.2	23.1	21.3	19.9	18.6	17.5	16.6	15.7	15.0	14.3	13.7	13.2	12.7	12.2	11.8	11.4	11.1	10.8	10.5	10.2	9.9	9.7	9.4	9.2	9.0	420
440	49.5	41.7	36.1	31.8	28.6	26.0	23.8	22.0	20.5	19.2	18.1	17.1	16.3	15.5	14.8	14.2	13.6	13.1	12.7	12.2	11.8	11.5	11.1	10.8	10.5	10.3	10.0	9.8	9.6	9.3	440
460	51.0	42.9	37.2	32.8	29.5	26.8	24.6	22.7	21.2	19.8	18.7	17.7	16.8	16.0	15.3	14.7	14.1	13.5	13.1	12.6	12.2	11.9	11.5	11.2	10.9	10.6	10.4	10.1	9.9	9.7	460
480	52.5	44.2	38.3	33.8	30.4	27.6	25.3	23.4	21.8	20.5	19.3	18.2	17.3	16.5	15.8	15.1	14.5	14.0	13.5	13.0	12.6	12.2	11.9	11.6	11.2	11.0	10.7	10.4	10.2	10.0	480
500	54.0	45.5	39.4	34.8	31.2	28.4	26.1	24.1	22.5	21.1	19.8	18.8	17.8	17.0	16.2	15.6	15.0	14.4	13.9	13.4	13.0	12.6	12.2	11.9	11.6	11.3	11.0	10.8	10.5	10.3	500
600	61.6	51.9	44.9	39.7	35.7	32.5	29.8	27.6	25.7	24.1	22.7	21.5	20.4	19.5	18.6	17.9	17.2	16.6	16.0	15.4	15.0	14.5	14.1	13.7	13.4	13.0	12.7	12.4	12.1	11.9	600
700	69.2	58.3	50.5	44.7	40.1	36.5	33.5	31.1	29.0	27.2	25.6	24.3	23.1	22.0	21.0	20.2	19.4	18.7	18.0	17.5	16.9	16.4	15.9	15.5	15.1	14.7	14.4	14.1	13.7	13.5	700
800	76.7	64.7	56.1	49.6	44.6	40.6	37.3	34.5	32.2	30.2	28.5	27.0	25.7	24.5	23.4	22.5	21.6	20.8	20.1	19.5	18.9	18.3	17.8	17.3	16.9	16.5	16.1	15.7	15.4	15.0	800
900	84.3	71.1	61.6	54.5	49.0	44.6	41.0	38.0	35.5	33.3	31.4	29.7	28.3	27.0	25.8	24.8	23.8	23.0	22.2	21.5	20.8	20.2	19.6	19.1	18.6	18.2	17.7	17.3	17.0	16.6	900
Term. 2/	16.226	13.522	11.590	10.141	9.014	8.113	7.375	6.761	6.241	5.795	5.409	5.071	4.772	4.507	4.270	4.057	3.863	3.688	3.527	3.380	3.245	3.120	3.005	2.898	2.798	2.704	2.617	2.535	2.458	2.386	Term. 2/
L. H. 3/	.075630	.063942	.055593	.049331	.044461	.040565	.037377	.034721	.032473	.030546	.028877	.027416	.026126	.024981	.023955	.023033	.022196	.021439	.020746	.020110	.019526	.018987	.018487	.018023	.017591	.017188	.016811	.016458	.016126	.015813	L. H. 3/

1/ Based on a tare weight of 24.0 tons and a ratio of empty car miles to loaded car miles of 0.330. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.09.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.35.

For Cost Level V(b), Carload operating expenses, rents and taxes plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 29 (Concluded).--TERRITORY NO. 5 - POCAHONTAS

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	10
20	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5	20
30	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	30
40	2.9	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	40
50	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	50
60	3.2	3.2	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	60
70	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	70
80	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	80
90	3.7	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	90
100	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	100
120	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	120
140	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	140
160	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.0	160
180	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	180
200	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	200
220	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	220
240	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	240
260	6.4	6.2	6.1	6.0	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	260
280	6.7	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	280
300	7.0	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	4.6	300
320	7.3	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	320
340	7.6	7.4	7.3	7.1	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	340
360	7.9	7.7	7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.3	5.2	360
380	8.2	8.0	7.9	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	380
400	8.5	8.4	8.2	8.0	7.9	7.7	7.6	7.5	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.7	400
420	8.8	8.7	8.5	8.3	8.2	8.0	7.9	7.7	7.6	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.2	6.1	6.1	6.0	5.9	5.9	420
440	9.1	9.0	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.3	6.2	6.2	6.1	440
460	9.5	9.3	9.1	8.9	8.7	8.6	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.4	6.3	460
480	9.8	9.6	9.4	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.7	6.6	6.5	480
500	10.1	9.9	9.7	9.5	9.3	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	7.0	6.9	6.8	6.8	500
600	11.5	11.4	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.0	7.9	7.9	600
700	13.0	12.9	12.7	12.4	12.2	12.0	11.8	11.6	11.4	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	9.0	700
800	14.7	14.4	14.2	13.9	13.7	13.4	13.2	13.0	12.8	12.6	12.4	12.3	12.1	11.9	11.8	11.6	11.5	11.4	11.2	11.1	11.0	10.9	10.7	10.6	10.5	10.4	10.3	10.2	10.1	10.1	800
900	16.3	16.0	15.7	15.4	15.1	14.9	14.6	14.4	14.2	14.0	13.8	13.6	13.4	13.2	13.0	12.9	12.7	12.6	12.4	12.3	12.2	12.0	11.9	11.8	11.7	11.6	11.5	11.3	11.2	11.1	900
Term. 2/	2.316	2.254	2.193	2.135	2.080	2.028	1.973	1.932	1.887	1.844	1.803	1.764	1.726	1.690	1.656	1.623	1.591	1.560	1.531	1.502	1.475	1.449	1.423	1.399	1.375	1.352	1.330	1.309	1.288	1.268	Term. 2/
L. H. 3/	.015519	.015240	.014977	.014728	.014491	.014266	.014052	.013849	.013655	.013469	.013292	.013123	.012961	.012805	.012656	.012513	.012375	.012243	.012116	.011994	.011875	.011762	.011652	.011546	.011443	.011344	.011248	.011156	.011066	.010979	L. H. 3/

1/ Based on a tare weight of 24.0 tons and a ratio of empty car miles to loaded car miles of 0.330. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.09.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.35.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 30.—TERRITORY NO. 5 - POCAHONTAS

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.0	14.2	12.2	10.7	9.5	8.5	7.8	7.1	6.6	6.1	5.7	5.4	5.0	4.8	4.5	4.3	4.1	3.9	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.6	10
20	17.8	14.9	12.8	11.2	10.0	9.0	8.2	7.5	6.9	6.4	6.0	5.6	5.3	5.0	4.8	4.5	4.3	4.1	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	20
30	18.6	15.6	13.4	11.7	10.4	9.4	8.6	7.9	7.3	6.8	6.3	5.9	5.6	5.3	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.3	3.2	3.1	3.1	3.0	2.9	30
40	19.4	16.2	13.9	12.2	10.9	9.8	9.0	8.2	7.6	7.1	6.6	6.2	5.9	5.6	5.3	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	40
50	20.2	16.9	14.5	12.8	11.4	10.3	9.3	8.6	8.0	7.4	6.9	6.5	6.1	5.8	5.5	5.3	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2	50
60	21.0	17.6	15.1	13.3	11.8	10.7	9.7	9.0	8.3	7.7	7.2	6.8	6.4	6.1	5.8	5.5	5.3	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	3.4	60
70	21.8	18.3	15.7	13.8	12.3	11.1	10.1	9.3	8.6	8.0	7.5	7.1	6.7	6.3	6.0	5.8	5.5	5.3	5.0	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.8	3.7	3.6	3.5	70
80	22.6	18.9	16.3	14.3	12.8	11.5	10.5	9.7	9.0	8.4	7.8	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	80
90	23.4	19.6	16.9	14.8	13.2	12.0	10.9	10.1	9.3	8.7	8.1	7.7	7.2	6.9	6.5	6.2	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.5	4.3	4.2	4.1	4.0	3.9	90
100	24.3	20.3	17.5	15.4	13.7	12.4	11.3	10.4	9.7	9.0	8.5	8.0	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.4	4.3	4.1	4.0	100
120	25.9	21.7	18.7	16.4	14.7	13.3	12.1	11.2	10.4	9.7	9.1	8.5	8.1	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.7	4.6	4.5	4.4	120
140	27.5	23.0	19.8	17.5	15.6	14.1	12.9	11.9	11.0	10.3	9.7	9.1	8.6	8.2	7.8	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	4.7	140
160	29.1	24.4	21.0	18.5	16.5	15.0	13.7	12.6	11.7	10.9	10.3	9.7	9.2	8.7	8.3	7.9	7.6	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.6	5.4	5.3	5.2	5.0	160
180	30.7	25.7	22.2	19.5	17.5	15.8	14.5	13.4	12.4	11.6	10.9	10.3	9.7	9.2	8.8	8.4	8.1	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.1	5.9	5.8	5.6	5.5	5.4	180
200	32.3	27.1	23.4	20.6	18.4	16.7	15.3	14.1	13.1	12.2	11.5	10.8	10.3	9.8	9.3	8.9	8.5	8.2	7.9	7.6	7.3	7.1	6.9	6.7	6.5	6.3	6.1	6.0	5.8	5.7	200
220	33.9	28.4	24.5	21.6	19.4	17.5	16.1	14.8	13.8	12.9	12.1	11.4	10.8	10.3	9.8	9.4	9.0	8.6	8.3	8.0	7.7	7.5	7.3	7.0	6.8	6.7	6.5	6.3	6.2	6.0	220
240	35.5	29.8	25.7	22.7	20.3	18.4	16.8	15.6	14.5	13.5	12.7	12.0	11.4	10.8	10.3	9.9	9.5	9.1	8.7	8.4	8.2	7.9	7.6	7.4	7.2	7.0	6.8	6.7	6.5	6.3	240
260	37.1	31.1	26.9	23.7	21.2	19.3	17.6	16.3	15.1	14.2	13.3	12.6	11.9	11.3	10.8	10.3	9.9	9.5	9.2	8.9	8.6	8.3	8.0	7.8	7.6	7.4	7.2	7.0	6.8	6.7	260
280	38.7	32.5	28.1	24.8	22.2	20.1	18.4	17.0	15.8	14.8	13.9	13.2	12.5	11.9	11.3	10.8	10.4	10.0	9.6	9.3	9.0	8.7	8.4	8.2	7.9	7.7	7.5	7.3	7.2	7.0	280
300	40.3	33.9	29.3	25.8	23.1	21.0	19.2	17.8	16.5	15.5	14.5	13.7	13.0	12.4	11.8	11.3	10.9	10.4	10.1	9.7	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.3	300
320	41.9	35.2	30.4	26.9	24.1	21.8	20.0	18.5	17.2	16.1	15.1	14.3	13.6	12.9	12.3	11.8	11.3	10.9	10.5	10.1	9.8	9.5	9.2	8.9	8.7	8.5	8.2	8.0	7.8	7.7	320
340	43.5	36.6	31.6	27.9	25.0	22.7	20.8	19.2	17.9	16.7	15.8	14.9	14.1	13.4	12.8	12.3	11.8	11.3	10.9	10.5	10.2	9.9	9.6	9.3	9.0	8.8	8.6	8.4	8.2	8.0	340
360	45.1	37.9	32.8	28.9	25.9	23.5	21.6	20.0	18.6	17.4	16.4	15.5	14.7	14.0	13.3	12.8	12.3	11.8	11.4	11.0	10.6	10.3	10.0	9.7	9.4	9.2	8.9	8.7	8.5	8.3	360
380	46.7	39.3	34.0	30.0	26.9	24.4	22.4	20.7	19.3	18.0	17.0	16.0	15.2	14.5	13.8	13.2	12.7	12.2	11.8	11.4	11.0	10.7	10.4	10.1	9.8	9.5	9.3	9.1	8.9	8.7	380
400	48.3	40.6	35.1	31.0	27.8	25.3	23.2	21.4	19.9	18.7	17.6	16.6	15.8	15.0	14.3	13.7	13.2	12.7	12.2	11.8	11.4	11.1	10.7	10.4	10.2	9.9	9.6	9.4	9.2	9.0	400
420	49.9	42.0	36.3	32.1	28.8	26.1	24.0	22.2	20.6	19.3	18.2	17.2	16.3	15.5	14.8	14.2	13.6	13.1	12.7	12.2	11.8	11.5	11.1	10.8	10.5	10.2	10.0	9.8	9.5	9.3	420
440	51.5	43.4	37.5	33.1	29.7	27.0	24.7	22.9	21.3	20.0	18.8	17.8	16.9	16.1	15.3	14.7	14.1	13.6	13.1	12.7	12.2	11.9	11.5	11.2	10.9	10.6	10.3	10.1	9.9	9.6	440
460	53.1	44.7	38.7	34.2	30.6	27.8	25.5	23.6	22.0	20.6	19.4	18.3	17.4	16.6	15.8	15.2	14.6	14.0	13.5	13.1	12.7	12.3	11.9	11.6	11.3	11.0	10.7	10.4	10.2	10.0	460
480	54.7	46.1	39.9	35.2	31.6	28.7	26.3	24.4	22.7	21.2	20.0	18.9	18.0	17.1	16.4	15.7	15.0	14.5	14.0	13.5	13.1	12.7	12.3	11.9	11.6	11.3	11.0	10.8	10.5	10.3	480
500	56.4	47.4	41.0	36.3	32.5	29.6	27.1	25.1	23.4	21.9	20.6	19.5	18.5	17.6	16.9	16.2	15.5	14.9	14.4	13.9	13.5	13.1	12.7	12.3	12.0	11.7	11.4	11.1	10.9	10.6	500
600	64.4	54.2	46.9	41.5	37.2	33.8	31.1	28.7	26.8	25.1	23.7	22.4	21.3	20.3	19.4	18.6	17.8	17.2	16.6	16.0	15.5	15.0	14.6	14.2	13.8	13.5	13.2	12.8	12.6	12.3	600
700	72.4	61.0	52.8	46.7	41.9	38.1	35.0	32.4	30.2	28.3	26.7	25.3	24.0	22.9	21.9	21.0	20.2	19.4	18.8	18.1	17.6	17.0	16.5	16.1	15.7	15.3	14.9	14.6	14.2	13.9	700
800	80.4	67.8	58.7	51.9	46.6	42.4	39.0	36.1	33.6	31.6	29.7	28.2	26.8	25.5	24.4	23.4	22.5	21.7	20.9	20.2	19.6	19.0	18.5	18.0	17.5	17.1	16.7	16.3	15.9	15.6	800
900	88.5	74.5	64.6	57.1	51.3	46.7	42.9	39.7	37.1	34.8	32.8	31.0	29.5	28.1	26.9	25.8	24.8	23.9	23.1	22.3	21.7	21.0	20.4	19.9	19.3	18.9	18.4	18.0	17.6	17.2	900
Term. 2/	16.216	13.529	11.590	10.141	9.014	8.113	7.375	6.761	6.241	5.795	5.409	5.071	4.772	4.507	4.270	4.057	3.863	3.688	3.527	3.380	3.245	3.120	3.005	2.898	2.798	2.704	2.617	2.535	2.458	2.386	Term. 2/
L. H. 3/	.080250	.067792	.058833	.052219	.047025	.042875	.039477	.036646	.034250	.032196	.030417	.028859	.027485	.026264	.025171	.024188	.023298	.022489	.021750	.021073	.020450	.019875	.019343	.018848	.018388	.017958	.017556	.017180	.016826	.016493	L. H. 3/

1/ Based on a car weight of 13.4 tons and a ratio of empty car miles to loaded car miles of 0.568. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.09.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.35.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 30 (Concluded).—TERRITORY NO. 5 - POCAHONTAS

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	10
20	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5	20
30	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	30
40	3.0	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	40
50	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	50
60	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	60
70	3.5	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	70
80	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	80
90	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	90
100	3.9	3.8	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	100
120	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	120
140	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.9	140
160	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	160
180	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.3	3.3	180
200	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	200
220	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.8	220
240	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	240
260	6.5	6.4	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	260
280	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	280
300	7.2	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.7	300
320	7.5	7.3	7.2	7.0	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	4.9	4.9	320
340	7.8	7.7	7.5	7.3	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	340
360	8.1	8.0	7.8	7.7	7.5	7.4	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	5.4	5.4	360
380	8.5	8.3	8.1	8.0	7.8	7.7	7.5	7.4	7.3	7.2	7.1	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.6	380
400	8.8	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.9	5.8	400
420	9.1	8.9	8.7	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	6.2	6.1	6.0	420
440	9.4	9.2	9.1	8.9	8.7	8.6	8.4	8.3	8.1	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.4	6.4	6.3	6.3	440
460	9.8	9.6	9.4	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	460
480	10.1	9.9	9.7	9.5	9.3	9.2	9.0	8.8	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.7	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.8	6.7	480
500	10.4	10.2	10.0	9.8	9.6	9.5	9.3	9.1	9.0	8.8	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	500
600	12.0	11.8	11.6	11.3	11.1	10.9	10.7	10.6	10.4	10.2	10.1	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	600
700	13.6	13.4	13.1	12.9	12.6	12.4	12.2	12.0	11.8	11.6	11.5	11.3	11.1	11.0	10.8	10.7	10.6	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	700
800	15.3	15.0	14.7	14.4	14.1	13.9	13.7	13.5	13.2	13.0	12.8	12.7	12.5	12.3	12.2	12.0	11.9	11.7	11.6	11.4	11.3	11.2	11.1	11.0	10.8	10.7	10.6	10.5	10.4	10.3	800
900	16.9	16.5	16.2	15.9	15.7	15.4	15.1	14.9	14.7	14.4	14.2	14.0	13.8	13.6	13.5	13.3	13.1	13.0	12.8	12.7	12.5	12.4	12.3	12.1	12.0	11.9	11.8	11.7	11.6	11.5	900
Term. 2/	2.318	2.254	2.193	2.135	2.080	2.028	1.979	1.932	1.887	1.844	1.803	1.764	1.726	1.690	1.656	1.623	1.591	1.560	1.531	1.502	1.475	1.449	1.423	1.399	1.375	1.352	1.330	1.309	1.288	1.268	Term. 2/
L. H. 3/	.016179	.015882	.015601	.015336	.015083	.014844	.014616	.014399	.014192	.013994	.013806	.013625	.013452	.013286	.013128	.012975	.012828	.012688	.012552	.012421	.012295	.012174	.012057	.011944	.011835	.011729	.011627	.011528	.011433	.011340	L. H. 3/

1/ Based on a tare weight of 19.4 tons and a ratio of empty car miles to loaded car miles of 0.568. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.09.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.35.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 31.--TERRITORY NO. 5 - POCAHONTAS

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.3	14.4	12.3	10.8	9.6	8.7	7.9	7.2	6.7	6.2	5.8	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.8	3.6	3.5	3.4	3.2	3.1	3.0	2.9	2.8	2.7	2.7	2.6	10
20	18.3	15.3	13.1	11.5	10.2	9.2	8.4	7.7	7.1	6.6	6.2	5.8	5.5	5.2	4.9	4.7	4.4	4.2	4.1	3.9	3.7	3.6	3.5	3.4	3.2	3.1	3.0	3.0	2.9	2.8	20
30	19.3	16.1	13.8	12.1	10.8	9.7	8.9	8.1	7.5	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.2	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	30
40	20.4	17.0	14.6	12.8	11.4	10.3	9.4	8.6	8.0	7.4	6.9	6.5	6.1	5.8	5.5	5.3	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	40
50	21.4	17.9	15.4	13.5	12.0	10.8	9.9	9.1	8.4	7.8	7.3	6.9	6.5	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	3.4	50
60	22.4	18.7	16.1	14.1	12.6	11.4	10.4	9.5	8.8	8.2	7.7	7.2	6.8	6.5	6.1	5.9	5.6	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	60
70	23.4	19.6	16.9	14.8	13.2	11.9	10.9	10.0	9.3	8.6	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	70
80	24.5	20.5	17.6	15.5	13.8	12.5	11.4	10.5	9.7	9.0	8.5	8.0	7.5	7.1	6.8	6.4	6.2	5.9	5.7	5.4	5.2	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.1	4.0	80
90	25.5	21.3	18.4	16.1	14.4	13.0	11.9	10.9	10.1	9.4	8.8	8.3	7.9	7.4	7.1	6.7	6.5	6.2	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.5	4.4	4.3	4.2	90
100	26.5	22.2	19.1	16.8	15.0	13.5	12.4	11.4	10.5	9.8	9.2	8.7	8.2	7.8	7.4	7.0	6.7	6.5	6.2	6.0	5.7	5.5	5.4	5.2	5.0	4.9	4.7	4.6	4.5	4.4	100
120	28.6	23.9	20.6	18.1	16.2	14.6	13.4	12.3	11.4	10.6	10.0	9.4	8.9	8.4	8.0	7.6	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.7	5.5	5.3	5.2	5.0	4.9	4.8	120
140	30.7	25.7	22.1	19.5	17.4	15.7	14.4	13.2	12.3	11.4	10.7	10.1	9.6	9.1	8.6	8.2	7.9	7.6	7.3	7.0	6.7	6.5	6.3	6.1	5.9	5.8	5.6	5.4	5.3	5.2	140
160	32.7	27.4	23.6	20.8	18.6	16.8	15.4	14.2	13.1	12.3	11.5	10.8	10.2	9.7	9.3	8.8	8.5	8.1	7.8	7.5	7.2	7.0	6.8	6.6	6.4	6.2	6.0	5.9	5.7	5.6	160
180	34.8	29.2	25.1	22.1	19.8	17.9	16.4	15.1	14.0	13.1	12.3	11.6	10.9	10.4	9.9	9.4	9.0	8.7	8.3	8.0	7.8	7.5	7.2	7.0	6.8	6.6	6.4	6.3	6.1	6.0	180
200	36.9	30.9	26.6	23.4	21.0	19.0	17.4	16.0	14.9	13.9	13.0	12.3	11.6	11.0	10.5	10.0	9.6	9.2	8.9	8.5	8.3	8.0	7.7	7.5	7.3	7.1	6.9	6.7	6.5	6.4	200
220	38.9	32.6	28.1	24.8	22.2	20.1	18.3	16.9	15.7	14.7	13.8	13.0	12.3	11.7	11.1	10.6	10.2	9.8	9.4	9.1	8.8	8.5	8.2	7.9	7.7	7.5	7.3	7.1	6.9	6.8	220
240	41.0	34.4	29.6	26.1	23.4	21.1	19.3	17.8	16.6	15.5	14.5	13.7	13.0	12.3	11.8	11.2	10.8	10.3	9.9	9.6	9.3	8.9	8.7	8.4	8.2	7.9	7.7	7.5	7.3	7.2	240
260	43.0	36.1	31.2	27.4	24.5	22.2	20.3	18.8	17.4	16.3	15.3	14.4	13.7	13.0	12.4	11.8	11.3	10.9	10.5	10.1	9.8	9.4	9.1	8.9	8.6	8.4	8.1	7.9	7.7	7.5	260
280	45.1	37.8	32.7	28.8	25.7	23.3	21.3	19.7	18.3	17.1	16.1	15.2	14.4	13.6	13.0	12.4	11.9	11.4	11.0	10.6	10.3	9.9	9.6	9.3	9.1	8.8	8.6	8.3	8.1	7.9	280
300	47.2	39.6	34.2	30.1	26.9	24.4	22.3	20.6	19.2	17.9	16.8	15.9	15.0	14.3	13.6	13.0	12.5	12.0	11.5	11.1	10.8	10.4	10.1	9.8	9.5	9.2	9.0	8.8	8.5	8.3	300
320	49.2	41.3	35.7	31.4	28.1	25.5	23.3	21.5	20.0	18.7	17.6	16.6	15.7	14.9	14.3	13.6	13.1	12.5	12.1	11.6	11.3	10.9	10.6	10.2	9.9	9.7	9.4	9.2	9.0	8.7	320
340	51.3	43.1	37.2	32.8	29.3	26.6	24.3	22.5	20.9	19.5	18.3	17.3	16.4	15.6	14.9	14.2	13.6	13.1	12.6	12.2	11.8	11.4	11.0	10.7	10.4	10.1	9.8	9.6	9.4	9.1	340
360	53.4	44.8	38.7	34.1	30.5	27.7	25.3	23.4	21.7	20.3	19.1	18.0	17.1	16.3	15.5	14.8	14.2	13.7	13.1	12.7	12.3	11.9	11.5	11.2	10.8	10.5	10.3	10.0	9.8	9.5	360
380	55.4	46.5	40.2	35.4	31.7	28.8	26.3	24.3	22.6	21.1	19.9	18.8	17.8	16.9	16.1	15.4	14.8	14.2	13.7	13.2	12.8	12.3	12.0	11.6	11.3	11.0	10.7	10.4	10.2	9.9	380
400	57.5	48.3	41.7	36.8	32.9	29.8	27.3	25.2	23.5	21.9	20.6	19.5	18.5	17.6	16.7	16.0	15.4	14.8	14.2	13.7	13.3	12.8	12.4	12.1	11.7	11.4	11.1	10.8	10.6	10.3	400
420	59.5	50.0	43.2	38.1	34.1	30.9	28.3	26.2	24.3	22.8	21.4	20.2	19.1	18.2	17.4	16.6	15.9	15.3	14.8	14.2	13.8	13.3	12.9	12.5	12.2	11.8	11.5	11.3	11.0	10.7	420
440	61.6	51.7	44.7	39.4	35.3	32.0	29.3	27.1	25.2	23.6	22.1	20.9	19.8	18.9	18.0	17.2	16.5	15.9	15.3	14.8	14.3	13.8	13.4	13.0	12.6	12.3	12.0	11.7	11.4	11.1	440
460	63.7	53.5	46.2	40.7	36.5	33.1	30.3	28.0	26.0	24.4	22.9	21.6	20.5	19.5	18.6	17.8	17.1	16.4	15.8	15.3	14.8	14.3	13.9	13.4	13.1	12.7	12.4	12.1	11.8	11.5	460
480	65.7	55.2	47.7	42.1	37.7	34.2	31.3	28.9	26.9	25.2	23.7	22.4	21.2	20.2	19.2	18.4	17.7	17.0	16.4	15.8	15.3	14.8	14.3	13.9	13.5	13.2	12.8	12.5	12.2	11.9	480
500	67.8	57.0	49.2	43.4	38.9	35.3	32.3	29.9	27.8	26.0	24.4	23.1	21.9	20.8	19.9	19.0	18.2	17.5	16.9	16.3	15.8	15.3	14.8	14.4	14.0	13.6	13.2	12.9	12.6	12.3	500
600	78.1	65.6	56.7	50.1	44.9	40.7	37.3	34.5	32.1	30.0	28.2	26.7	25.3	24.1	23.0	22.0	21.1	20.3	19.6	18.9	18.3	17.7	17.2	16.7	16.2	15.8	15.4	15.0	14.6	14.3	600
700	88.4	74.3	64.3	56.7	50.8	46.1	42.3	39.1	36.4	34.1	32.0	30.3	28.7	27.3	26.1	25.0	24.0	23.1	22.2	21.5	20.8	20.1	19.5	19.0	18.4	17.9	17.5	17.1	16.7	16.3	700
800	98.7	83.0	71.8	63.4	56.8	51.6	47.3	43.7	40.7	38.1	35.8	33.9	32.1	30.6	29.2	28.0	26.9	25.8	24.9	24.1	23.3	22.5	21.9	21.2	20.7	20.1	19.6	19.1	18.7	18.3	800
900	109.1	91.7	79.3	70.0	62.8	57.0	52.3	48.3	45.0	42.1	39.7	37.5	35.6	33.9	32.3	31.0	29.7	28.6	27.6	26.6	25.8	25.0	24.2	23.5	22.9	22.3	21.7	21.2	20.7	20.3	900
Term. 2/	16.226	13.522	11.590	10.141	9.014	8.113	7.375	6.761	6.241	5.795	5.409	5.071	4.772	4.507	4.270	4.057	3.863	3.688	3.527	3.380	3.245	3.120	3.005	2.898	2.798	2.704	2.617	2.535	2.458	2.386	Term. 2/
L. H. 3/	.103140	.086867	.075243	.066525	.059744	.054320	.049852	.046183	.043054	.040371	.038047	.036013	.034218	.032622	.031195	.029910	.028746	.027691	.026726	.025842	.025028	.024277	.023581	.022936	.022334	.021773	.021248	.020756	.020294	.019859	L. H. 3/

1/ Based on a tare weight of 22.1 tons and a ratio of empty car miles to loaded car miles of 0.928. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.09.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.35.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE XI (Concluded).--TERRITORY NO. 5 - POCAHONTAS

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.4	10
20	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	20
30	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	30
40	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	40
50	3.3	3.2	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	50
60	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	60
70	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	70
80	3.9	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	80
90	4.1	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.9	2.9	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	90
100	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	100
120	4.7	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	120
140	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1	3.1	140
160	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	160
180	5.8	5.7	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	180
200	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.5	3.9	200
220	6.6	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	220
240	7.0	6.8	6.7	6.5	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	240
260	7.4	7.2	7.1	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	260
280	7.8	7.6	7.4	7.3	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	5.0	4.9	280
300	8.2	8.0	7.8	7.6	7.5	7.3	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.3	5.2	300
320	8.5	8.4	8.2	8.0	7.8	7.7	7.5	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.9	5.9	5.7	5.7	5.6	5.5	5.5	320
340	8.9	8.7	8.5	8.4	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.7	340
360	9.3	9.1	8.9	8.7	8.6	8.4	8.2	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.7	6.7	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	360
380	9.7	9.5	9.3	9.1	8.9	8.8	8.6	8.4	8.3	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.3	380
400	10.1	9.9	9.7	9.5	9.3	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.5	400
420	10.5	10.3	10.0	9.8	9.6	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	6.9	6.9	6.8	420
440	10.9	10.6	10.4	10.2	10.0	9.8	9.6	9.5	9.3	9.1	9.0	8.9	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.0	440
460	11.3	11.0	10.8	10.6	10.4	10.2	10.0	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.8	7.7	7.6	7.5	7.5	7.4	7.3	460
480	11.7	11.4	11.2	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.6	480
500	12.0	11.8	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	500
600	14.0	13.7	13.4	13.1	12.9	12.7	12.4	12.2	12.0	11.8	11.6	11.4	11.3	11.1	10.9	10.8	10.6	10.5	10.4	10.2	10.1	10.0	9.7	9.7	9.6	9.5	9.4	9.3	9.2	9.1	600
700	15.9	15.6	15.3	15.0	14.7	14.4	14.2	13.9	13.7	13.5	13.2	13.0	12.8	12.7	12.5	12.3	12.1	12.0	11.8	11.7	11.5	11.4	11.3	11.1	11.0	10.9	10.8	10.7	10.6	10.5	700
800	17.9	17.5	17.1	16.8	16.5	16.2	15.9	15.6	15.4	15.1	14.9	14.7	14.4	14.2	14.0	13.8	13.6	13.5	13.3	13.1	13.0	12.8	12.7	12.5	12.4	12.3	12.1	12.0	11.9	11.8	800
900	19.8	19.4	19.0	18.6	18.3	18.0	17.6	17.3	17.1	16.8	16.5	16.3	16.0	15.8	15.6	15.4	15.2	15.0	14.8	14.6	14.4	14.2	14.1	13.9	13.8	13.6	13.5	13.3	13.2	13.1	900
Term. 2/	2.318	2.254	2.193	2.135	2.080	2.028	1.979	1.932	1.887	1.844	1.803	1.764	1.726	1.690	1.656	1.623	1.591	1.560	1.531	1.502	1.475	1.449	1.423	1.399	1.375	1.352	1.330	1.309	1.288	1.268	Term. 2/
L. H. 3/	.019449	.019061	.018695	.018347	.018018	.017705	.017407	.017124	.016853	.016595	.016349	.016113	.015887	.015671	.015463	.015264	.015073	.014888	.014711	.014541	.014376	.014218	.014065	.013917	.013775	.013637	.013503	.013374	.013249	.013128	L. H. 3/

1/ Based on a tare weight of 22.1 tons and a ratio of empty car miles to loaded car miles of 0.925. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.09.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.35.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 32.--TERRITORY NO. 5 - POCAHONTAS

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	15.9	13.2	11.4	9.9	8.8	8.0	7.2	6.6	6.1	5.7	5.3	5.0	4.7	4.5	4.2	4.0	3.8	3.7	3.5	3.4	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4	10
20	17.1	14.2	12.2	10.7	9.5	8.6	7.8	7.2	6.6	6.2	5.8	5.4	5.1	4.8	4.6	4.3	4.1	4.0	3.8	3.6	3.5	3.4	3.2	3.1	3.0	2.9	2.8	2.8	2.7	2.6	20
30	18.2	15.2	13.1	11.5	10.2	9.2	8.4	7.7	7.1	6.6	6.2	5.8	5.5	5.2	4.9	4.7	4.5	4.3	4.1	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	30
40	19.4	16.2	13.9	12.2	10.9	9.8	8.9	8.2	7.6	7.1	6.6	6.2	5.9	5.5	5.3	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	40
50	20.6	17.2	14.8	13.0	11.6	10.4	9.5	8.7	8.1	7.5	7.0	6.6	6.2	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.4	3.4	3.3	50
60	21.8	18.2	15.6	13.7	12.2	11.0	10.1	9.3	8.6	8.0	7.5	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	60
70	22.9	19.2	16.5	14.5	12.9	11.7	10.6	9.8	9.1	8.4	7.9	7.4	7.0	6.6	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	70
80	24.1	20.2	17.3	15.2	13.6	12.3	11.2	10.3	9.5	8.9	8.3	7.8	7.4	7.0	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.1	4.0	3.9	80
90	25.3	21.1	18.2	16.0	14.3	12.9	11.8	10.8	10.0	9.3	8.8	8.2	7.8	7.4	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.4	4.3	4.1	90
100	26.5	22.1	19.1	16.7	14.9	13.5	12.3	11.3	10.5	9.8	9.2	8.6	8.2	7.7	7.4	7.0	6.7	6.4	6.2	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.7	4.6	4.5	4.4	100
120	28.8	24.1	20.8	18.3	16.3	14.7	13.5	12.4	11.5	10.7	10.0	9.5	8.9	8.5	8.1	7.7	7.4	7.1	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	120
140	31.2	26.1	22.5	19.8	17.7	16.0	14.6	13.4	12.5	11.6	10.9	10.3	9.7	9.2	8.8	8.4	8.0	7.7	7.4	7.1	6.8	6.6	6.4	6.2	6.0	5.8	5.7	5.5	5.4	5.2	140
160	33.5	28.1	24.2	21.3	19.0	17.2	15.7	14.5	13.4	12.5	11.8	11.1	10.5	9.9	9.5	9.0	8.6	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.1	6.0	5.8	5.7	160
180	35.9	30.0	25.9	22.8	20.4	18.4	16.8	15.5	14.4	13.4	12.6	11.9	11.2	10.7	10.2	9.7	9.3	8.9	8.6	8.3	8.0	7.7	7.4	7.2	7.0	6.8	6.6	6.4	6.3	6.1	180
200	38.2	32.0	27.6	24.3	21.7	19.7	18.0	16.6	15.4	14.4	13.5	12.7	12.0	11.4	10.9	10.4	9.9	9.5	9.2	8.8	8.5	8.2	8.0	7.7	7.5	7.3	7.1	6.9	6.7	6.6	200
220	40.6	34.0	29.3	25.8	23.1	20.9	19.1	17.6	16.3	15.3	14.3	13.5	12.8	12.1	11.6	11.0	10.6	10.2	9.8	9.4	9.1	8.8	8.5	8.2	8.0	7.8	7.6	7.4	7.2	7.0	220
240	42.9	36.0	31.0	27.3	24.4	22.1	20.2	18.6	17.3	16.2	15.2	14.3	13.6	12.9	12.3	11.7	11.2	10.8	10.4	10.0	9.6	9.3	9.0	8.7	8.5	8.3	8.0	7.8	7.6	7.4	240
260	45.3	38.0	32.7	28.8	25.8	23.3	21.4	19.7	18.3	17.1	16.0	15.1	14.3	13.6	13.0	12.4	11.9	11.4	11.0	10.6	10.2	9.9	9.5	9.3	9.0	8.7	8.5	8.3	8.1	7.9	260
280	47.6	39.9	34.4	30.3	27.1	24.6	22.5	20.7	19.3	18.0	16.9	15.9	15.1	14.3	13.7	13.1	12.5	12.0	11.6	11.1	10.8	10.4	10.1	9.8	9.5	9.2	9.0	8.7	8.5	8.3	280
300	50.0	41.9	36.2	31.8	28.5	25.8	23.6	21.8	20.2	18.9	17.8	16.7	15.9	15.1	14.4	13.7	13.2	12.6	12.2	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.4	9.2	9.0	8.8	300
320	52.3	43.9	37.9	33.4	29.8	27.0	24.7	22.8	21.2	19.8	18.6	17.6	16.6	15.8	15.1	14.4	13.8	13.2	12.7	12.3	11.9	11.5	11.1	10.8	10.5	10.2	9.9	9.7	9.4	9.2	320
340	54.7	45.9	39.6	34.9	31.2	28.3	25.9	23.9	22.2	20.7	19.5	18.4	17.4	16.5	15.8	15.1	14.4	13.9	13.3	12.9	12.4	12.0	11.6	11.3	11.0	10.7	10.4	10.1	9.9	9.6	340
360	57.0	47.8	41.3	36.4	32.6	29.5	27.0	24.9	23.1	21.6	20.3	19.2	18.2	17.3	16.5	15.7	15.1	14.5	13.9	13.4	13.0	12.6	12.2	11.8	11.5	11.2	10.9	10.6	10.3	10.1	360
380	59.4	49.8	43.0	37.9	33.9	30.7	28.1	26.0	24.1	22.5	21.2	20.0	18.9	18.0	17.2	16.4	15.7	15.1	14.5	14.0	13.5	13.1	12.7	12.3	12.0	11.6	11.3	11.0	10.8	10.5	380
400	61.7	51.8	44.7	39.4	35.3	32.0	29.3	27.0	25.1	23.5	22.0	20.8	19.7	18.7	17.9	17.1	16.4	15.7	15.1	14.6	14.1	13.6	13.2	12.8	12.5	12.1	11.8	11.5	11.2	11.0	400
420	64.1	53.8	46.4	40.9	36.6	33.2	30.4	28.0	26.1	24.4	22.9	21.6	20.5	19.5	18.6	17.7	17.0	16.3	15.7	15.2	14.7	14.2	13.7	13.3	13.0	12.6	12.3	12.0	11.7	11.4	420
440	66.4	55.7	48.1	42.4	38.0	34.4	31.5	29.1	27.0	25.3	23.8	22.4	21.2	20.2	19.3	18.4	17.7	17.0	16.3	15.8	15.2	14.7	14.3	13.8	13.5	13.1	12.7	12.4	12.1	11.8	440
460	68.8	57.7	49.8	43.9	39.3	35.6	32.6	30.1	28.0	26.2	24.6	23.2	22.0	20.9	20.0	19.1	18.3	17.6	16.9	16.3	15.8	15.3	14.8	14.4	13.9	13.6	13.2	12.9	12.6	12.3	460
480	71.1	59.7	51.5	45.4	40.7	36.8	33.8	31.2	29.0	27.1	25.5	24.0	22.8	21.7	20.7	19.8	18.9	18.2	17.5	16.9	16.3	15.8	15.3	14.9	14.4	14.1	13.7	13.3	13.0	12.7	480
500	73.5	61.7	53.3	46.9	42.0	38.1	34.9	32.2	29.9	28.0	26.3	24.8	23.5	22.4	21.4	20.4	19.6	18.8	18.1	17.5	16.9	16.3	15.8	15.4	14.9	14.5	14.2	13.8	13.5	13.1	500
600	83.2	71.6	61.8	54.3	48.8	44.3	40.5	37.4	34.8	32.6	30.6	28.9	27.4	26.1	24.9	23.8	22.8	21.9	21.1	20.4	19.7	19.1	18.5	17.9	17.4	17.0	16.5	16.1	15.7	15.3	600
700	97.0	81.4	70.4	62.0	55.6	50.4	46.2	42.6	39.7	37.1	34.9	32.9	31.2	29.7	28.4	27.1	26.0	25.0	24.1	23.2	22.5	21.8	21.1	20.5	19.9	19.4	18.9	18.4	18.0	17.5	700
800	108.7	91.3	78.9	69.6	62.4	56.6	51.8	47.9	44.5	41.7	39.2	37.0	35.1	33.4	31.9	30.5	29.2	28.1	27.1	26.1	25.3	24.5	23.7	23.0	22.4	21.8	21.2	20.7	20.2	19.7	800
900	120.5	101.2	87.5	77.2	69.1	62.7	57.5	53.1	49.4	46.2	43.5	41.1	38.9	37.0	35.4	33.8	32.5	31.2	30.1	29.0	28.1	27.2	26.3	25.6	24.9	24.2	23.6	23.0	22.5	21.9	900
Term. 2/	14.704	12.253	10.503	9.190	8.169	7.352	6.684	6.127	5.655	5.251	4.901	4.595	4.325	4.084	3.869	3.676	3.501	3.342	3.197	3.063	2.941	2.828	2.723	2.626	2.535	2.451	2.372	2.298	2.228	2.162	Term. 2/
L. H. 3/	.117520	.098850	.085514	.075513	.067733	.061510	.056418	.052175	.048585	.045507	.042840	.040506	.038447	.036617	.034979	.033505	.032171	.030999	.029852	.028838	.027904	.027042	.026244	.025504	.024814	.024170	.023568	.023003	.022473	.021974	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.999. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.09.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including/the less-carload and passenger portion, multiply by 1.35.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 32 (Concluded).--TERRITORY NO. 5 - POCAHONTAS

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.3	2.3	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.7	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40	3.0	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50	3.2	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100	4.3	4.1	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
120	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.5	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
140	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
160	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
180	6.0	5.8	5.7	5.6	5.5	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.6	4.5	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
200	6.4	6.3	6.1	6.0	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
220	6.8	6.7	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
240	7.3	7.1	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.7	5.6	5.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
260	7.7	7.5	7.4	7.2	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
280	8.1	7.9	7.8	7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
300	8.6	8.4	8.2	8.0	7.8	7.7	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
320	9.0	8.8	8.6	8.4	8.2	8.1	7.9	7.8	7.6	7.5	7.4	7.3	7.1	7.0	6.9	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
340	9.4	9.2	9.0	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
360	9.8	9.6	9.4	9.2	9.0	8.9	8.7	8.5	8.4	8.2	8.1	8.0	7.8	7.7	7.6	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
380	10.3	10.0	9.8	9.6	9.4	9.2	9.1	8.9	8.7	8.6	8.5	8.3	8.2	8.1	7.9	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
400	10.7	10.5	10.2	10.0	9.8	9.6	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
420	11.1	10.9	10.7	10.4	10.2	10.0	9.8	9.7	9.5	9.3	9.2	9.0	8.9	8.7	8.6	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
440	11.6	11.3	11.1	10.8	10.6	10.4	10.2	10.0	9.9	9.7	9.5	9.4	9.2	9.1	8.9	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
460	12.0	11.7	11.5	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.7	9.6	9.4	9.3	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
480	12.4	12.1	11.9	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.8	9.6	9.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
500	12.9	12.6	12.3	12.1	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	10.0	9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
600	15.0	14.7	14.4	14.1	13.8	13.5	13.3	13.1	12.8	12.6	12.4	12.2	12.0	11.8	11.7	11.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
700	17.2	16.8	16.4	16.1	15.8	15.5	15.2	14.9	14.7	14.4	14.2	14.0	13.8	13.6	13.4	13.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
800	19.3	18.9	18.5	18.1	17.8	17.4	17.1	16.8	16.5	16.3	16.0	15.7	15.5	15.3	15.0	14.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
900	21.5	21.0	20.6	20.2	19.8	19.4	19.0	18.7	18.4	18.1	17.8	17.5	17.2	17.0	16.7	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
Term. 2/	2.101	2.(.2	1.987	1.935	1.885	1.838	1.793	1.750	1.710	1.671	1.634	1,598	1.564	1.532	1.500	1.470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.021503	.021056	.020638	.020239	.019862	.019503	.019161	.018836	.018526	.018230	.017947	.017676	.017417	.017169	.016931	.016702	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.999. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.09.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.35.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 5 - Pocahontas

STOCK CARS

TABLE 33.—TERRITORY NO. 5 - POCAHONTAS

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.5	14.6	12.5	11.0	9.8	8.8	8.0	7.3	6.8	6.3	5.9	5.5	5.2	4.9	4.2	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	-	-	-	-	10
20	18.8	15.7	13.5	11.8	10.5	9.5	8.6	7.9	7.3	6.8	6.3	5.9	5.6	5.3	4.6	4.8	4.6	4.4	4.2	4.0	3.8	3.7	3.6	3.4	3.3	3.2	-	-	-	-	20
30	30.1	16.8	14.4	12.6	11.2	10.1	9.2	8.5	7.8	7.3	6.8	6.4	6.0	5.7	5.0	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.9	3.7	3.6	3.5	-	-	-	-	30
40	21.4	17.8	15.3	13.4	12.0	10.8	9.8	9.0	8.4	7.8	7.3	6.8	6.4	6.1	5.4	5.5	5.3	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.7	-	-	-	-	40
50	22.7	18.9	16.3	14.3	12.7	11.5	10.4	9.6	8.9	8.3	7.7	7.3	6.9	6.5	5.8	5.9	5.6	5.4	5.1	4.9	4.8	4.6	4.4	4.3	4.1	4.0	-	-	-	-	50
60	23.9	20.0	17.2	15.1	13.4	12.1	11.1	10.2	9.4	8.8	8.2	7.7	7.3	6.9	6.1	6.2	6.0	5.7	5.5	5.2	5.1	4.9	4.7	4.5	4.4	4.3	-	-	-	-	60
70	25.2	21.1	18.1	15.9	14.2	12.8	11.7	10.7	9.9	9.3	8.7	8.1	7.7	7.3	6.5	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	-	-	-	-	70
80	26.5	22.2	19.1	16.7	14.9	13.5	12.3	11.3	10.5	9.8	9.1	8.6	8.1	7.7	6.9	7.0	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.1	4.9	4.8	-	-	-	-	80
90	27.8	23.2	20.0	17.6	15.7	14.1	12.9	11.9	11.0	10.2	9.6	9.0	8.5	8.1	7.3	7.3	7.0	6.7	6.4	6.2	6.0	5.7	5.6	5.4	5.2	5.0	-	-	-	-	90
100	29.1	24.3	20.9	18.4	16.4	14.8	13.5	12.4	11.5	10.7	10.1	9.5	8.9	8.5	7.7	7.7	7.3	7.0	6.8	6.5	6.3	6.0	5.8	5.6	5.5	5.3	-	-	-	-	100
120	31.6	26.5	22.8	20.0	17.9	16.2	14.7	13.6	12.6	11.7	11.0	10.3	9.8	9.3	8.4	8.4	8.0	7.7	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.8	-	-	-	-	120
140	34.2	28.6	24.7	21.7	19.4	17.5	16.0	14.7	13.6	12.7	11.9	11.2	10.6	10.1	9.2	9.1	8.7	8.4	8.0	7.7	7.5	7.2	7.0	6.7	6.5	6.3	-	-	-	-	140
160	36.6	30.8	26.5	23.3	20.8	18.8	17.2	15.8	14.7	13.7	12.9	12.1	11.4	10.9	9.9	9.9	9.4	9.0	8.7	8.4	8.1	7.8	7.5	7.3	7.1	6.9	-	-	-	-	160
180	39.4	33.0	28.4	25.0	22.3	20.2	18.4	17.0	15.7	14.7	13.8	13.0	12.3	11.6	10.7	10.6	10.1	9.7	9.3	9.0	8.7	8.4	8.1	7.8	7.6	7.4	-	-	-	-	180
200	41.9	35.1	30.3	26.6	23.8	21.5	19.7	18.1	16.8	15.7	14.7	13.9	13.1	12.4	11.4	11.3	10.8	10.4	10.0	9.6	9.3	9.0	8.7	8.4	8.1	7.9	-	-	-	-	200
220	44.5	37.3	32.1	28.3	25.3	22.9	20.9	19.2	17.9	16.7	15.6	14.7	13.9	13.2	12.2	12.0	11.5	11.0	10.6	10.2	9.9	9.5	9.2	8.9	8.7	8.4	-	-	-	-	220
240	47.1	39.4	34.0	29.9	26.7	24.2	22.1	20.4	18.9	17.7	16.6	15.6	14.8	14.0	13.0	12.8	12.2	11.7	11.3	10.9	10.5	10.1	9.8	9.5	9.2	8.9	-	-	-	-	240
260	49.6	41.6	35.9	31.6	28.2	25.5	23.3	21.5	20.0	18.6	17.5	16.5	15.6	14.8	13.7	13.5	12.9	12.4	11.9	11.5	11.1	10.7	10.4	10.0	9.7	9.5	-	-	-	-	260
280	52.2	43.8	37.7	33.2	29.7	26.9	24.6	22.7	21.0	19.6	18.4	17.4	16.4	15.6	14.5	14.2	13.6	13.1	12.6	12.1	11.7	11.3	10.9	10.6	10.3	10.0	-	-	-	-	280
300	54.8	45.9	39.6	34.9	31.2	28.2	25.8	23.8	22.1	20.6	19.4	18.3	17.3	16.4	15.2	14.9	14.3	13.7	13.2	12.7	12.3	11.9	11.5	11.1	10.8	10.5	-	-	-	-	300
320	57.4	48.1	41.5	36.5	32.6	29.6	27.0	24.9	23.1	21.6	20.3	19.1	18.1	17.2	16.0	15.7	15.0	14.4	13.8	13.3	12.9	12.5	12.1	11.7	11.3	11.0	-	-	-	-	320
340	59.9	50.3	43.3	38.2	34.1	30.9	28.3	26.1	24.2	22.6	21.2	20.0	18.9	18.0	16.7	16.4	15.7	15.1	14.5	14.0	13.5	13.0	12.6	12.2	11.9	11.5	-	-	-	-	340
360	62.5	52.4	45.2	39.8	35.6	32.2	29.5	27.2	25.3	23.6	22.2	20.9	19.8	18.8	17.5	18.1	16.4	15.7	15.1	14.6	14.1	13.6	13.2	12.8	12.4	12.1	-	-	-	-	360
380	65.1	54.6	47.1	41.5	37.1	33.6	30.7	28.3	26.3	24.6	23.1	21.8	20.6	19.6	18.3	17.8	17.1	16.4	15.8	15.2	14.7	14.2	13.8	13.3	12.9	12.6	-	-	-	-	380
400	67.6	56.7	48.9	43.1	38.6	34.9	31.9	29.5	27.4	25.6	24.0	22.6	21.4	20.4	19.0	18.6	17.8	17.1	16.4	15.8	15.3	14.8	14.3	13.9	13.5	13.1	-	-	-	-	400
420	70.2	58.9	50.8	44.7	40.0	36.3	33.2	30.6	28.4	26.6	24.9	23.5	22.3	21.2	19.8	19.3	18.5	17.7	17.1	16.5	15.9	15.4	14.9	14.4	14.0	13.6	-	-	-	-	420
440	72.8	61.1	52.7	46.4	41.5	37.6	34.4	31.7	29.5	27.5	25.9	24.4	23.1	22.0	20.5	20.0	19.2	18.4	17.7	17.1	16.5	16.0	15.4	15.0	14.6	14.1	-	-	-	-	440
460	75.3	63.2	54.5	48.0	43.0	38.9	35.6	32.9	30.5	28.5	26.8	25.3	23.9	22.8	21.3	20.7	19.9	19.1	18.4	17.7	17.1	16.5	16.0	15.5	15.1	14.7	-	-	-	-	460
480	77.9	65.4	56.4	49.7	44.5	40.3	36.9	34.0	31.6	29.5	27.7	26.2	24.8	23.6	22.0	21.5	20.6	19.7	19.0	18.3	17.7	17.1	16.6	16.1	15.6	15.2	-	-	-	-	480
500	80.5	67.5	58.3	51.3	45.9	41.6	38.1	35.1	32.7	30.5	28.7	27.0	25.6	24.3	22.8	22.2	21.3	20.4	19.7	18.9	18.3	17.7	17.1	16.6	16.2	15.7	-	-	-	-	500
600	93.3	78.3	67.6	59.6	53.3	48.3	44.2	40.8	37.9	35.5	33.3	31.4	29.8	28.3	26.6	25.8	24.7	23.8	22.9	22.1	21.3	20.6	20.0	19.4	18.8	18.3	-	-	-	-	600
700	106.2	89.1	77.0	67.8	60.7	55.0	50.4	46.5	43.2	40.4	38.0	35.8	34.0	32.3	30.4	29.4	28.2	27.1	26.1	25.2	24.3	23.5	22.8	22.1	21.5	20.9	-	-	-	-	700
800	119.1	99.9	86.3	76.1	68.1	61.7	56.5	52.2	48.5	45.3	42.6	40.2	38.1	36.2	34.2	33.1	31.7	30.5	29.3	28.3	27.3	26.4	25.6	24.9	24.2	23.5	-	-	-	-	800
900	131.9	110.7	95.6	84.3	75.5	68.4	62.7	57.8	53.8	50.3	47.3	44.6	42.3	40.2	38.0	36.7	35.2	33.8	32.5	31.4	30.3	29.4	28.5	27.6	26.8	26.1	-	-	-	-	900
Term. 2/	16.226	13.522	11.590	10.141	9.014	8.113	7.375	6.761	6.241	5.795	5.409	5.071	4.772	4.507	3.863	4.057	3.863	3.688	3.527	3.380	3.245	3.120	3.005	2.898	2.798	2.704	-	-	-	-	Term. 2/
L. H. 3/	.128530	.108025	.093379	.082394	.073859	.067015	.061423	.056763	.052819	.049439	.046510	.043947	.041685	.039675	.037876	.036258	.034793	.033461	.032246	.031131	.030106	.029160	.028283	.027470	.026712	.026005	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 20.8 tons and a ratio of empty car miles to loaded car miles of 1.500. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.09.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.35.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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TABLE 34.—TERRITORY NO. 5 - POCAHONTAS

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	15.9	13.3	11.4	10.0	8.9	8.0	7.3	6.7	6.2	5.7	5.3	5.0	4.7	4.5	4.2	4.0	3.8	3.7	3.5	3.4	3.2	3.1	3.0	2.9	2.8	2.7	-	-	-	-	10
20	17.1	14.3	12.3	10.7	9.6	8.6	7.8	7.2	6.7	6.2	5.8	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.1	3.0	2.9	-	-	-	-	20
30	18.3	15.3	13.1	11.5	10.3	9.2	8.4	7.7	7.1	6.7	6.2	5.8	5.5	5.2	4.9	4.7	4.5	4.3	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.2	-	-	-	-	30
40	19.5	16.3	14.0	12.3	10.9	9.9	9.0	8.3	7.6	7.1	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.5	3.4	-	-	-	-	40
50	20.7	17.3	14.9	13.1	11.6	10.5	9.6	8.8	8.1	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	3.7	-	-	-	-	50
60	21.9	18.3	15.8	13.8	12.3	11.1	10.2	9.3	8.6	8.0	7.5	7.1	6.7	6.3	6.0	5.7	5.5	5.2	5.0	4.8	4.7	4.5	4.3	4.2	4.1	3.9	-	-	-	-	60
70	23.2	19.4	16.6	14.6	13.0	11.8	10.7	9.9	9.1	8.5	8.0	7.5	7.1	6.7	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	-	-	-	-	70
80	24.4	20.4	17.5	15.4	13.7	12.4	11.3	10.4	9.6	9.0	8.4	7.9	7.5	7.1	6.7	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	-	-	-	-	80
90	25.6	21.4	18.4	16.2	14.4	13.0	11.9	10.9	10.1	9.4	8.9	8.3	7.9	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	-	-	-	-	90
100	26.8	22.4	19.3	16.9	15.1	13.7	12.5	11.5	10.6	9.9	9.3	8.7	8.3	7.8	7.5	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.2	5.1	4.9	-	-	-	-	100
120	29.2	24.4	21.0	18.5	16.5	14.9	13.6	12.5	11.6	10.8	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.1	6.9	6.6	6.4	6.1	5.9	5.8	5.6	5.4	-	-	-	-	120
140	31.6	26.5	22.8	20.0	17.9	16.2	14.8	13.6	12.6	11.8	11.0	10.4	9.8	9.3	8.9	8.5	8.1	7.8	7.5	7.2	6.9	6.7	6.5	6.3	6.1	5.9	-	-	-	-	140
160	34.0	28.5	24.5	21.6	19.3	17.4	15.9	14.7	13.6	12.7	11.9	11.2	10.6	10.1	9.6	9.2	8.8	8.4	8.1	7.8	7.5	7.3	7.0	6.8	6.6	6.4	-	-	-	-	160
180	36.4	30.5	26.3	23.1	20.7	18.7	17.1	15.8	14.6	13.6	12.8	12.1	11.4	10.8	10.3	9.8	9.4	9.0	8.7	8.4	8.1	7.8	7.6	7.3	7.1	6.9	-	-	-	-	180
200	38.8	32.6	28.1	24.7	22.1	20.0	18.3	16.8	15.6	14.6	13.7	12.9	12.2	11.6	11.0	10.5	10.1	9.7	9.3	9.0	8.6	8.4	8.1	7.8	7.6	7.4	-	-	-	-	200
220	41.3	34.6	29.8	26.2	23.5	21.2	19.4	17.9	16.6	15.5	14.6	13.7	13.0	12.3	11.7	11.2	10.7	10.3	9.9	9.6	9.2	8.9	8.6	8.4	8.1	7.9	-	-	-	-	220
240	43.7	36.6	31.6	27.8	24.8	22.5	20.6	19.0	17.6	16.4	15.4	14.6	13.8	13.1	12.5	11.9	11.4	10.9	10.5	10.1	9.8	9.5	9.2	8.9	8.6	8.4	-	-	-	-	240
260	46.1	38.6	33.3	29.3	26.2	23.8	21.7	20.0	18.6	17.4	16.3	15.4	14.6	13.8	13.2	12.6	12.1	11.6	11.1	10.7	10.4	10.0	9.7	9.4	9.1	8.9	-	-	-	-	260
280	48.5	40.7	35.1	30.9	27.6	25.0	22.9	21.1	19.6	18.3	17.2	16.2	15.4	14.6	13.9	13.3	12.7	12.2	11.7	11.3	10.9	10.6	10.2	9.9	9.6	9.4	-	-	-	-	280
300	50.9	42.7	36.8	32.4	29.0	26.3	24.0	22.2	20.6	19.2	18.1	17.0	16.1	15.3	14.6	14.0	13.4	12.8	12.4	11.9	11.5	11.1	10.8	10.4	10.1	9.9	-	-	-	-	300
320	53.3	44.7	38.6	34.0	30.4	27.5	25.2	23.2	21.6	20.2	18.9	17.9	16.9	16.1	15.3	14.7	14.0	13.5	13.0	12.5	12.1	11.7	11.3	11.0	10.7	10.4	-	-	-	-	320
340	55.7	46.8	40.3	35.5	31.8	28.8	26.4	24.3	22.6	21.1	19.8	18.7	17.7	16.8	16.0	15.3	14.7	14.1	13.6	13.1	12.6	12.2	11.8	11.5	11.2	10.8	-	-	-	-	340
360	58.2	48.8	42.1	37.1	33.2	30.1	27.5	25.4	23.6	22.0	20.7	19.5	18.5	17.6	16.8	16.0	15.4	14.7	14.2	13.7	13.2	12.8	12.4	12.0	11.7	11.3	-	-	-	-	360
380	60.6	50.8	43.9	38.6	34.6	31.3	28.7	26.5	24.6	23.0	21.6	20.4	19.3	18.3	17.5	16.7	16.0	15.4	14.8	14.3	13.8	13.3	12.9	12.5	12.2	11.8	-	-	-	-	380
400	63.0	52.8	45.6	40.2	36.0	32.6	29.8	27.5	25.6	23.9	22.5	21.2	20.1	19.1	18.2	17.4	16.7	16.0	15.4	14.9	14.4	13.9	13.5	13.1	12.7	12.3	-	-	-	-	400
420	65.4	54.9	47.4	41.7	37.4	33.9	31.0	28.6	26.6	24.8	23.3	22.0	20.9	19.8	18.9	18.1	17.3	16.6	16.0	15.5	14.9	14.4	14.0	13.6	13.2	12.8	-	-	-	-	420
440	67.8	56.9	49.1	43.3	38.7	35.1	32.1	29.7	27.6	25.8	24.2	22.9	21.7	20.6	19.6	18.8	18.0	17.3	16.6	16.0	15.5	15.0	14.5	14.1	13.7	13.3	-	-	-	-	440
460	70.2	58.9	50.9	44.8	40.1	36.4	33.3	30.7	28.6	26.7	25.1	23.7	22.4	21.3	20.3	19.5	18.6	17.9	17.2	16.6	16.1	15.5	15.1	14.6	14.2	13.8	-	-	-	-	460
480	72.6	61.0	52.6	46.4	41.5	37.6	34.5	31.8	29.6	27.6	26.0	24.5	23.2	22.1	21.1	20.1	19.3	18.5	17.9	17.2	16.6	16.1	15.6	15.1	14.7	14.3	-	-	-	-	480
500	75.0	63.0	54.4	47.9	42.9	38.9	35.6	32.9	30.6	28.6	26.8	25.3	24.0	22.8	21.8	20.8	20.0	19.2	18.5	17.8	17.2	16.7	16.1	15.7	15.2	14.8	-	-	-	-	500
600	87.1	73.1	63.2	55.7	49.9	45.2	41.4	38.2	35.5	33.2	31.2	29.5	28.0	26.6	25.4	24.3	23.3	22.4	21.5	20.8	20.1	19.4	18.8	18.3	17.8	17.3	-	-	-	-	600
700	99.2	83.3	71.9	63.4	56.8	51.5	47.2	43.6	40.5	37.9	35.6	33.6	31.9	30.3	28.9	27.7	26.5	25.5	24.6	23.7	22.9	22.2	21.5	20.9	20.3	19.7	-	-	-	-	700
800	111.3	93.4	80.7	71.2	63.8	57.8	53.0	48.9	45.5	42.6	40.0	37.8	35.8	34.1	32.5	31.1	29.8	28.7	27.6	26.7	25.8	24.9	24.2	23.5	22.8	22.2	-	-	-	-	800
900	123.3	103.6	89.5	78.9	70.7	64.1	58.8	54.3	50.5	47.2	44.4	41.9	39.8	37.8	36.1	34.5	33.1	31.9	30.7	29.6	28.6	27.7	26.9	26.1	25.4	24.7	-	-	-	-	900
Term. 2/	14.704	12.253	10.503	9.190	8.169	7.352	6.684	6.127	5.655	5.251	4.901	4.595	4.325	4.084	3.869	3.676	3.501	3.342	3.197	3.063	2.941	2.828	2.723	2.626	2.535	2.451	-	-	-	-	Term. 2/
L. H. 3/	.120690	.101492	.087779	.077494	.069494	.063095	.057859	.053496	.049804	.046639	.043897	.041497	.039379	.037497	.035813	.034298	.032926	.031680	.030541	.029498	.028538	.027652	.026831	.026070	.025360	.024698	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.696. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.09.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.35.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.47.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 35.--TERRITORY NO. 5 - POCAHONTAS

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																										Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	77.9	60.6	52.0	46.8	43.3	40.9	39.0	37.6	36.4	35.5	34.7	34.0	33.5	33.0	32.5	32.2	31.8	31.5	31.2	31.0	30.8	30.6	30.4	30.2	30.0	29.9	29.8	29.6	29.5	10
20	82.1	63.5	54.2	48.6	44.9	42.2	40.2	38.7	37.4	36.4	35.6	34.8	34.2	33.7	33.2	32.8	32.4	32.1	31.8	31.6	31.3	31.1	30.9	30.7	30.5	30.4	30.2	30.1	30.0	20
30	86.3	66.3	56.4	50.4	46.4	43.5	41.4	39.7	38.4	37.3	36.4	35.6	35.0	34.4	33.9	33.5	33.1	32.7	32.4	32.1	31.9	31.6	31.4	31.2	31.0	30.9	30.7	30.6	30.4	30
40	90.5	69.2	58.6	52.2	47.9	44.9	42.6	40.8	39.4	38.2	37.3	36.4	35.7	35.1	34.6	34.1	33.7	33.3	33.0	32.7	32.4	32.2	31.9	31.7	31.5	31.3	31.2	31.0	30.9	40
50	94.7	72.1	60.8	54.0	49.4	46.2	43.8	41.9	40.4	39.1	38.1	37.2	36.5	35.8	35.3	34.8	34.3	33.9	33.6	33.3	33.0	32.7	32.4	32.2	32.0	31.8	31.6	31.5	31.3	50
60	98.9	75.0	63.0	55.8	51.0	47.5	45.0	43.0	41.4	40.1	39.0	38.0	37.2	36.6	36.0	35.4	35.0	34.5	34.2	33.8	33.5	33.2	33.0	32.7	32.5	32.3	32.1	31.9	31.8	60
70	103.2	77.8	65.2	57.5	52.5	48.9	46.1	44.0	42.3	41.0	39.8	38.8	38.0	37.3	36.6	36.1	35.6	35.1	34.7	34.4	34.1	33.8	33.5	33.2	33.0	32.8	32.6	32.4	32.2	70
80	107.4	80.7	67.3	59.3	54.0	50.2	47.3	45.1	43.3	41.9	40.7	39.6	38.8	38.0	37.3	36.7	36.2	35.8	35.3	34.9	34.6	34.3	34.0	33.7	33.5	33.3	33.0	32.8	32.7	80
90	111.6	83.6	69.5	61.1	55.5	51.5	48.5	46.2	44.3	42.8	41.5	40.4	39.5	38.7	38.0	37.4	36.8	36.4	35.9	35.5	35.1	34.8	34.5	34.2	34.0	33.7	33.5	33.3	33.1	90
100	115.8	86.4	71.7	62.9	57.1	52.9	49.7	47.3	45.3	43.7	42.4	41.2	40.3	39.4	38.7	38.1	37.5	37.0	36.5	36.1	35.7	35.3	35.0	34.7	34.5	34.2	34.0	33.8	33.6	100
120	124.2	92.2	76.1	66.5	60.1	55.5	52.1	49.4	47.3	45.5	44.1	42.8	41.8	40.9	40.1	39.4	38.7	38.2	37.7	37.2	36.8	36.4	36.1	35.7	35.4	35.2	34.9	34.7	34.5	120
140	132.6	97.9	80.5	70.1	63.2	58.2	54.5	51.6	49.3	47.4	45.8	44.4	43.3	42.3	41.4	40.7	40.0	39.4	38.8	38.3	37.9	37.5	37.1	36.7	36.4	36.1	35.9	35.6	35.4	140
160	141.1	103.6	84.9	73.7	66.2	60.9	56.8	53.7	51.2	49.2	47.5	46.0	44.8	43.7	42.8	42.0	41.2	40.6	40.0	39.5	39.0	38.5	38.1	37.8	37.4	37.1	36.8	36.5	36.3	160
180	149.5	109.4	89.3	77.3	69.2	63.5	59.2	55.9	53.2	51.0	49.2	47.6	46.3	45.2	44.2	43.3	42.5	41.8	41.2	40.6	40.1	39.6	39.2	38.8	38.4	38.0	37.7	37.4	37.2	180
200	157.9	115.1	93.7	80.9	72.3	66.2	61.6	58.0	55.2	52.8	50.9	49.3	47.8	46.6	45.5	44.6	43.8	43.0	42.3	41.7	41.2	40.7	40.2	39.8	39.4	39.0	38.7	38.3	38.1	200
220	166.3	120.8	98.1	84.4	75.3	68.8	64.0	60.2	57.1	54.7	52.6	50.9	49.4	48.1	46.9	45.9	45.0	44.2	43.5	42.9	42.3	41.7	41.2	40.8	40.4	40.0	39.6	39.3	39.0	220
240	174.7	126.6	102.5	88.0	78.4	71.5	66.3	62.3	59.1	56.5	54.3	52.5	50.9	49.5	48.3	47.2	46.3	45.4	44.7	44.0	43.4	42.8	42.3	41.8	41.3	40.9	40.5	40.2	39.9	240
260	183.2	132.3	106.9	91.6	81.4	74.2	68.7	64.5	61.1	58.3	56.0	54.1	52.4	50.9	49.7	48.5	47.5	46.6	45.8	45.1	44.5	43.8	43.3	42.8	42.3	41.9	41.5	41.1	40.8	260
280	191.6	138.0	111.3	95.2	84.5	76.8	71.1	66.6	63.1	60.1	57.7	55.7	53.9	52.4	51.0	49.8	48.8	47.9	47.0	46.2	45.5	44.9	44.3	43.8	43.3	42.8	42.4	42.0	41.7	280
300	200.0	143.8	115.7	98.8	87.5	79.5	73.5	68.8	65.0	62.0	59.4	57.3	55.4	53.8	52.4	51.2	50.0	49.1	48.2	47.4	46.6	46.0	45.4	44.8	44.3	43.8	43.4	42.9	42.6	300
320	208.4	149.5	120.0	102.4	90.6	82.2	75.9	70.9	67.0	63.8	61.1	58.9	56.9	55.2	53.8	52.5	51.3	50.3	49.3	48.5	47.7	47.0	46.4	45.8	45.3	44.8	44.3	43.9	43.4	320
340	216.8	155.2	124.4	106.0	93.6	84.8	78.2	73.1	69.0	65.6	62.8	60.5	58.4	56.7	55.1	53.8	52.6	51.5	50.5	49.6	48.8	48.1	47.4	46.8	46.2	45.7	45.2	44.8	44.3	340
360	225.3	161.0	128.8	109.5	96.7	87.5	80.6	75.3	71.0	67.5	64.5	62.1	59.9	58.1	56.5	55.1	53.8	52.7	51.7	50.8	49.9	49.2	48.5	47.8	47.2	46.7	46.2	45.7	45.2	360
380	233.7	166.7	133.2	113.1	99.7	90.2	83.0	77.4	72.9	69.3	66.2	63.7	61.5	59.5	57.9	56.4	55.1	53.9	52.8	51.9	51.0	50.2	49.5	48.8	48.2	47.6	47.1	46.6	46.1	380
400	242.1	172.4	137.6	116.7	102.8	92.8	85.4	79.6	74.9	71.1	67.9	65.3	63.0	61.0	59.2	57.7	56.3	55.1	54.0	53.0	52.1	51.3	50.5	49.8	49.2	48.6	48.0	47.5	47.0	400
420	250.5	178.2	142.0	120.3	105.8	95.5	87.7	81.7	76.9	72.9	69.7	66.9	64.5	62.4	60.6	59.0	57.6	56.3	55.2	54.1	53.2	52.3	51.6	50.8	50.2	49.6	49.0	48.4	47.9	420
440	259.0	183.9	146.4	123.9	108.9	98.2	90.1	83.9	78.9	74.8	71.4	68.5	66.0	63.9	62.0	60.3	58.8	57.5	56.3	55.3	54.3	53.4	52.6	51.8	51.2	50.5	49.9	49.4	48.8	440
460	267.4	189.7	150.8	127.5	111.9	100.8	92.5	86.0	80.8	76.6	73.1	70.1	67.5	65.3	63.3	61.6	60.1	58.7	57.5	56.4	55.4	54.5	53.6	52.9	52.1	51.5	50.9	50.3	49.7	460
480	275.8	195.4	155.2	131.1	115.0	103.5	94.9	88.2	82.8	78.4	74.8	71.7	69.0	66.7	64.7	62.9	61.4	60.0	58.7	57.5	56.5	55.5	54.7	53.9	53.1	52.4	51.8	51.2	50.6	480
500	284.2	201.1	159.6	134.6	118.0	106.1	97.2	90.3	84.8	80.2	76.5	73.3	70.5	68.2	66.1	64.3	62.6	61.2	59.9	58.7	57.6	56.6	55.7	54.9	54.1	53.4	52.7	52.1	51.5	500
600	326.3	229.3	181.5	152.6	133.3	119.5	109.1	101.1	94.6	89.4	85.0	81.3	78.1	75.3	72.9	70.8	68.9	67.2	65.7	64.3	63.1	61.9	60.9	59.9	59.0	58.2	57.4	56.7	56.0	600
700	368.4	258.5	203.5	170.5	148.5	132.8	121.0	111.8	104.5	98.5	93.5	89.3	85.7	82.5	79.8	77.3	75.2	73.3	71.5	70.0	68.5	67.2	66.0	64.9	63.9	63.0	62.1	61.3	60.5	700
800	410.5	287.1	225.4	188.4	163.7	146.1	132.9	122.6	114.4	107.7	102.0	97.3	93.2	89.7	86.6	83.9	81.5	79.3	77.4	75.6	74.0	72.5	71.2	70.0	68.8	67.8	66.8	65.9	65.0	800
900	452.7	315.8	247.4	206.4	179.0	159.4	144.8	133.4	124.3	116.8	110.6	105.3	100.8	96.9	93.5	90.4	87.8	85.4	83.2	81.2	79.5	77.8	76.4	75.0	73.7	72.6	71.5	70.5	69.5	900
Term. 2/	73.680	57.745	49.780	45.000	41.815	39.535	37.830	36.500	35.440	34.570	33.845	33.235	32.710	32.255	31.855	31.505	31.190	30.910	30.660	30.430	30.225	30.035	29.865	29.705	29.555	29.420	29.295	29.175	29.065	Term. 2/
L. H. 3/	.42108	.28675	.21958	.17928	.15241	.13322	.11883	.10764	.09868	.09135	.08525	.08008	.07565	.07181	.06846	.06549	.06286	.06050	.05838	.05646	.05472	.05312	.05166	.05032	.04908	.04793	.04687	.0458	.04495	L. H. 3/

1/ Based on a tare weight of 24.0 tons and a ratio of empty car miles to loaded car miles of 0.330. The Less-carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.
For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.21.
For Cost Leve III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.30.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.
See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 6 - Southern

BOX CARS

TABLE 36.—TERRITORY NO. 6 - SOUTHERN

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.0	14.1	12.1	10.6	9.5	8.5	7.8	7.1	6.6	6.1	5.7	5.4	5.0	4.8	4.5	4.3	4.1	3.9	3.8	3.6	3.5	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.6	10
20	17.8	14.9	12.8	11.2	10.0	9.0	8.2	7.5	7.0	6.5	6.1	5.7	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.8	20
30	18.7	15.6	13.4	11.8	10.5	9.5	8.6	7.9	7.3	6.8	6.4	6.0	5.7	5.4	5.1	4.8	4.6	4.4	4.3	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	3.0	30
40	19.6	16.4	14.1	12.4	11.0	9.9	9.1	8.3	7.7	7.2	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.2	40
50	20.4	17.1	14.7	12.9	11.5	10.4	9.5	8.8	8.1	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	3.4	50
60	21.3	17.8	15.4	13.5	12.1	10.9	10.0	9.2	8.5	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.7	4.5	4.3	4.2	4.1	4.0	3.8	3.7	3.6	3.5	60
70	22.2	18.6	16.0	14.1	12.6	11.4	10.4	9.6	8.9	8.3	7.8	7.3	6.9	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.1	3.9	3.8	3.7	70
80	23.0	19.3	16.6	14.6	13.1	11.8	10.8	10.0	9.3	8.6	8.1	7.6	7.2	6.9	6.5	6.2	6.0	5.7	5.5	5.3	5.1	5.0	4.8	4.6	4.5	4.4	4.3	4.1	4.0	3.9	80
90	23.9	20.1	17.3	15.2	13.6	12.3	11.3	10.4	9.6	9.0	8.5	8.0	7.5	7.2	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.5	4.4	4.2	4.1	90
100	24.8	20.8	17.9	15.8	14.1	12.8	11.7	10.8	10.0	9.4	8.8	8.3	7.9	7.5	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.3	5.1	4.9	4.8	4.7	4.6	4.4	4.3	100
120	26.5	22.3	19.2	16.9	15.2	13.7	12.6	11.6	10.8	10.1	9.5	9.0	8.5	8.1	7.7	7.4	7.1	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	5.0	4.8	4.7	120
140	28.3	23.7	20.5	18.1	16.2	14.7	13.5	12.4	11.6	10.8	10.2	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.0	6.8	6.6	6.4	6.2	6.0	5.8	5.7	5.5	5.4	5.2	5.1	140
160	30.0	25.2	21.8	19.2	17.2	15.7	14.3	13.3	12.3	11.5	10.9	10.3	9.7	9.3	8.9	8.5	8.1	7.8	7.5	7.3	7.0	6.8	6.6	6.4	6.2	6.1	5.9	5.8	5.6	5.5	160
180	31.8	26.7	23.1	20.4	18.3	16.6	15.2	14.1	13.1	12.3	11.6	10.9	10.4	9.9	9.4	9.0	8.7	8.3	8.0	7.8	7.5	7.3	7.1	6.9	6.7	6.5	6.3	6.2	6.0	5.9	180
200	33.5	28.2	24.4	21.5	19.3	17.6	16.1	14.9	13.9	13.0	12.2	11.6	11.0	10.5	10.0	9.6	9.2	8.9	8.5	8.3	8.0	7.7	7.5	7.3	7.1	6.9	6.8	6.6	6.4	6.3	200
220	35.2	29.7	25.7	22.7	20.4	18.5	17.0	15.7	14.6	13.7	12.9	12.2	11.6	11.1	10.6	10.1	9.7	9.4	9.1	8.7	8.5	8.2	8.0	7.8	7.5	7.4	7.2	7.0	6.8	6.7	220
240	37.0	31.1	27.0	23.8	21.4	19.5	17.9	16.5	15.4	14.5	13.6	12.9	12.2	11.7	11.2	10.7	10.3	9.9	9.6	9.2	8.9	8.7	8.4	8.2	8.0	7.8	7.6	7.4	7.3	7.1	240
260	38.7	32.6	28.2	25.0	22.4	20.4	18.7	17.4	16.2	15.2	14.3	13.5	12.9	12.3	11.7	11.3	10.8	10.4	10.1	9.7	9.4	9.1	8.9	8.6	8.4	8.2	8.0	7.8	7.7	7.5	260
280	40.4	34.1	29.5	26.1	23.5	21.4	19.6	18.2	17.0	15.9	15.0	14.2	13.5	12.9	12.3	11.8	11.4	10.9	10.6	10.2	9.9	9.6	9.3	9.1	8.9	8.6	8.4	8.2	8.1	7.9	280
300	42.2	35.6	30.8	27.3	24.5	22.3	20.5	19.0	17.7	16.6	15.7	14.9	14.1	13.5	12.9	12.4	11.9	11.5	11.1	10.7	10.4	10.1	9.8	9.5	9.3	9.1	8.8	8.6	8.5	8.3	300
320	43.9	37.0	32.1	28.4	25.6	23.3	21.4	19.8	18.5	17.4	16.4	15.5	14.7	14.1	13.5	12.9	12.4	12.0	11.6	11.2	10.9	10.5	10.2	10.0	9.7	9.5	9.3	9.1	8.9	8.7	320
340	45.7	38.5	33.4	29.6	26.6	24.2	22.3	20.6	19.3	18.1	17.1	16.2	15.4	14.7	14.0	13.5	13.0	12.5	12.1	11.7	11.3	11.0	10.7	10.4	10.2	9.9	9.7	9.5	9.3	9.1	340
360	47.4	40.0	34.7	30.7	27.6	25.2	23.1	21.5	20.0	18.8	17.7	16.8	16.0	15.3	14.6	14.0	13.5	13.0	12.6	12.2	11.8	11.5	11.2	10.9	10.6	10.3	10.1	9.9	9.7	9.5	360
380	49.1	41.5	36.0	31.9	28.7	26.1	24.0	22.3	20.8	19.5	18.4	17.5	16.6	15.9	15.2	14.6	14.0	13.5	13.1	12.7	12.3	11.9	11.6	11.3	11.0	10.8	10.5	10.3	10.1	9.9	380
400	50.9	42.9	37.3	33.0	29.7	27.1	24.9	23.1	21.6	20.3	19.1	18.1	17.3	16.5	15.8	15.2	14.6	14.1	13.6	13.2	12.8	12.4	12.1	11.7	11.5	11.2	10.9	10.7	10.5	10.2	400
420	52.6	44.4	38.6	34.2	30.7	28.0	25.8	23.9	22.3	21.0	19.8	18.8	17.9	17.1	16.4	15.7	15.1	14.6	14.1	13.7	13.2	12.9	12.5	12.2	11.9	11.6	11.3	11.1	10.9	10.6	420
440	54.4	45.9	39.8	35.3	31.8	29.0	26.7	24.7	23.1	21.7	20.5	19.4	18.5	17.7	16.9	16.3	15.7	15.1	14.6	14.1	13.7	13.3	13.0	12.6	12.3	12.0	11.8	11.5	11.3	11.0	440
460	56.1	47.4	41.1	36.5	32.8	29.9	27.5	25.5	23.9	22.4	21.2	20.1	19.1	18.3	17.5	16.8	16.2	15.6	15.1	14.6	14.2	13.8	13.4	13.1	12.8	12.5	12.2	11.9	11.7	11.4	460
480	57.8	48.8	42.4	37.6	33.9	30.9	28.4	26.4	24.6	23.2	21.9	20.7	19.8	18.9	18.1	17.4	16.7	16.1	15.6	15.1	14.7	14.3	13.9	13.5	13.2	12.9	12.6	12.3	12.1	11.8	480
500	59.6	50.3	43.7	38.8	34.9	31.8	29.3	27.2	25.4	23.9	22.6	21.4	20.4	19.5	18.7	17.9	17.3	16.7	16.1	15.6	15.2	14.7	14.3	14.0	13.6	13.3	13.0	12.7	12.5	12.2	500
600	68.3	57.7	50.2	44.5	40.1	36.6	33.7	31.3	29.3	27.5	26.0	24.7	23.5	22.5	21.5	20.7	20.0	19.3	18.6	18.1	17.5	17.1	16.6	16.2	15.8	15.4	15.1	14.8	14.5	14.2	600
700	77.0	65.1	56.6	50.2	45.3	41.3	38.1	35.4	33.1	31.1	29.4	28.0	26.6	25.5	24.4	23.5	22.6	21.9	21.1	20.5	19.9	19.4	18.9	18.4	18.0	17.6	17.2	16.8	16.5	16.2	700
800	85.7	72.5	63.0	56.0	50.5	46.1	42.5	39.5	36.9	34.8	32.9	31.2	29.8	28.5	27.3	26.3	25.3	24.5	23.7	23.0	22.3	21.7	21.1	20.6	20.1	19.7	19.3	18.9	18.5	18.1	800
900	94.4	79.9	69.5	61.7	55.7	50.8	46.9	43.6	40.8	38.4	36.3	34.5	32.9	31.5	30.2	29.1	28.0	27.1	26.2	25.4	24.7	24.0	23.4	22.8	22.3	21.8	21.3	20.9	20.5	20.1	900
1000	103.1	87.2	75.9	67.5	60.9	55.6	51.3	47.7	44.6	42.0	39.8	37.8	36.0	34.5	33.1	31.8	30.7	30.0	28.7	27.9	27.1	26.4	25.7	25.1	24.5	23.9	23.4	22.9	22.5	22.1	1000
1100	111.8	94.6	82.4	73.2	66.1	60.3	55.7	51.8	48.5	45.6	43.2	41.1	39.2	37.5	36.0	34.6	33.4	32.3	31.3	30.3	29.5	28.7	28.0	27.3	26.6	26.1	25.5	25.0	24.5	24.0	1100
1200	120.5	102.0	88.8	78.9	71.2	65.1	60.1	55.9	52.3	49.3	46.6	44.3	42.3	40.5	38.9	37.4	36.1	34.9	33.8	32.8	31.9	31.0	30.2	29.5	28.8	28.2	27.6	27.0	26.5	26.0	1200
1300	129.2	109.4	95.3	84.7	76.4	69.8	64.5	60.0	56.2	52.9	50.1	47.6	45.4	43.5	41.7	40.2	38.8	37.5	36.3	35.2	34.3	33.3	32.5	31.7	31.0	30.3	30.0	29.1	28.5	28.0	1300
1400	137.9	116.8	101.7	90.4	81.6	74.6	68.9	64.1	60.0	56.5	53.5	50.9	48.6	46.5	44.6	43.0	41.5	40.1	38.8	37.7	36.6	35.7	34.8	33.9	33.2	32.4	31.7	31.1	30.5	30.0	1400
1500	146.6	124.2	108.2	96.2	86.8	79.4	73.2	68.2	63.8	60.2	57.0	54.2	51.7	49.5	47.5	45.8	44.2	42.7	41.4	40.2	39.0	38.0	37.0	36.2	35.3	34.6	33.8	33.2	32.5	31.9	1500
Term. 2/	16.090	13.408	11.493	10.056	8.939	8.045	7.314	6.704	6.188	5.746	5.363	5.028	4.732	4.469	4.234	4.023	3.831	3.657	3.498	3.352	3.218	3.094	2.980	2.873	2.774	2.682	2.595	2.514	2.438	2.366	Term. 2/
L. H. 3/	.086980	.073833	.064443	.057400	.051922	.047540	.043955	.040967	.038438	.036271	.034393	.032750	.031300	.030011	.028858	.027820	.026881	.026027	.025248	.024533	.023876	.023269	.022707	.022186	.021700	.021247	.020823	.020425	.020052	.019700	L. H. 3/

1/ Based on a tare weight of 22.4 tons and a ratio of empty car miles to loaded car miles of 0.294. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.16.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 36 (Concluded).—TERRITORY NO. 6 - SOUTHERN

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.5	2.4	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.4	10
20	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	20
30	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	30
40	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	40
50	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	50
60	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	60
70	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.3	70
80	3.8	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.4	2.4	80
90	4.0	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	90
100	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	100
120	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	120
140	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	140
160	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	160
180	5.8	5.7	5.6	5.4	5.3	5.2	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	180
200	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	200
220	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	220
240	6.9	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.7	240
260	7.3	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	5.0	260
280	7.7	7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.3	5.3	280
300	8.1	8.0	7.8	7.7	7.5	7.4	7.3	7.2	7.1	6.9	6.8	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.6	5.5	300
320	8.5	8.3	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.9	5.8	320
340	8.9	8.7	8.6	8.4	8.3	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	6.3	6.3	6.2	6.2	6.1	340
360	9.3	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.6	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.8	6.7	6.6	6.6	6.5	6.4	6.4	360
380	9.7	9.5	9.3	9.1	9.0	8.8	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	7.0	6.9	6.9	6.8	6.7	6.7	380
400	10.0	9.9	9.7	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.1	7.0	7.0	400
420	10.4	10.2	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.4	7.3	7.2	420
440	10.8	10.6	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7	7.7	7.6	7.5	440
460	11.2	11.0	10.8	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.0	8.0	7.9	7.8	460
480	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.2	10.0	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.5	8.4	8.3	8.2	8.2	8.1	480
500	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.7	10.5	10.4	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.8	8.7	8.6	8.5	8.5	8.4	500
600	13.9	13.7	13.4	13.2	13.0	12.8	12.6	12.4	12.2	12.1	11.9	11.8	11.6	11.5	11.3	11.2	11.1	11.0	10.8	10.7	10.6	10.5	10.4	10.3	10.2	10.1	10.1	10.0	9.9	9.8	600
700	15.9	15.6	15.3	15.1	14.8	14.6	14.3	14.2	14.0	13.8	13.6	13.4	13.3	13.1	12.9	12.8	12.7	12.5	12.4	12.3	12.2	12.0	11.9	11.8	11.7	11.6	11.5	11.4	11.3	11.2	700
800	17.8	17.5	17.2	16.9	16.6	16.4	16.1	15.9	15.7	15.5	15.3	15.1	14.9	14.7	14.6	14.4	14.2	14.1	14.0	13.8	13.7	13.6	13.4	13.3	13.2	13.1	13.0	12.9	12.8	12.7	800
900	19.8	19.4	19.1	18.7	18.5	18.2	17.9	17.7	17.4	17.2	17.0	16.8	16.6	16.4	16.2	16.0	15.8	15.7	15.5	15.4	15.2	15.1	14.9	14.8	14.7	14.5	14.4	14.3	14.2	14.1	900
1000	21.7	21.3	20.9	20.6	20.3	20.0	19.7	19.4	19.1	18.9	18.7	18.4	18.2	18.0	17.8	17.6	17.4	17.2	17.1	16.9	16.7	16.6	16.4	16.3	16.1	16.0	15.9	15.8	15.6	15.5	1000
1100	23.6	23.2	22.8	22.4	22.1	21.8	21.5	21.2	20.9	20.6	20.3	20.1	19.9	19.6	19.4	19.2	19.0	18.8	18.6	18.4	18.3	18.1	17.9	17.8	17.6	17.5	17.3	17.2	17.1	16.9	1100
1200	25.5	25.1	24.7	24.3	23.9	23.6	23.2	22.9	22.6	22.3	22.0	21.8	21.5	21.3	21.0	20.8	20.6	20.4	20.2	20.0	19.8	19.6	19.4	19.3	19.1	18.9	18.8	18.7	18.5	18.4	1200
1300	27.5	27.0	26.6	26.1	25.7	25.4	25.0	24.7	24.3	24.0	23.7	23.4	23.2	22.9	22.6	22.4	22.2	21.9	21.7	21.5	21.3	21.1	20.9	20.8	20.6	20.4	20.3	20.1	19.9	19.8	1300
1400	29.4	29.0	28.4	28.0	27.6	27.1	26.8	26.4	26.1	25.7	25.4	25.1	24.8	24.5	24.3	24.0	23.7	23.5	23.3	23.1	22.8	22.6	22.4	22.2	22.1	21.9	21.7	21.5	21.4	21.2	1400
1500	31.4	30.8	30.3	29.8	29.4	29.0	28.5	28.2	27.8	27.4	27.1	26.8	26.4	26.2	25.9	25.6	25.3	25.1	24.8	24.6	24.4	24.2	23.9	23.7	23.5	23.4	23.2	23.0	22.8	22.7	1500
Term. 2/	2.299	2.235	2.174	2.117	2.063	2.011	1.962	1.915	1.871	1.828	1.788	1.749	1.712	1.676	1.642	1.609	1.577	1.547	1.518	1.490	1.463	1.437	1.411	1.387	1.364	1.341	1.319	1.298	1.277	1.257	Term. 2/
L. H. 3/	.019369	.019056	.018759	.018479	.018213	.017960	.017720	.017490	.017272	.017064	.016864	.016674	.016491	.016317	.016149	.015988	.015833	.015685	.015542	.015404	.015271	.015143	.015019	.014900	.014785	.014673	.014566	.014461	.014360	.014263	L. H. 3/

1/ Based on a tare weight of 22.4 tons and a ratio of empty car miles to loaded car miles of 0.294. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.16.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 6 - Southern

FLAT CARS

TABLE 37.--TERRITORY NO. 6 - SOUTHERN

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.2	14.3	12.3	10.8	9.6	8.6	7.8	7.2	6.7	6.2	5.8	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.8	3.6	3.5	3.4	3.2	3.1	3.0	2.9	2.8	2.8	2.7	2.6	10
20	18.2	15.2	13.1	11.5	10.2	9.2	8.4	7.7	7.1	6.6	6.2	5.8	5.5	5.2	4.9	4.7	4.5	4.3	4.1	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	20
30	19.3	16.1	13.9	12.2	10.8	9.8	8.9	8.2	7.6	7.1	6.6	6.2	5.9	5.5	5.3	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	30
40	20.4	17.0	14.7	12.9	11.5	10.4	9.4	8.7	8.0	7.5	7.0	6.6	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.3	40
50	21.5	17.9	15.4	13.6	12.1	10.9	10.0	9.2	8.5	7.9	7.4	7.0	6.6	6.3	5.9	5.7	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	50
60	22.5	18.9	16.2	14.3	12.7	11.5	10.5	9.7	9.0	8.4	7.8	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.0	3.9	3.8	3.7	60
70	23.6	19.8	17.0	15.0	13.4	12.1	11.0	10.2	9.4	8.8	8.2	7.8	7.3	7.0	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.1	4.0	70
80	24.7	20.7	17.8	15.7	14.0	12.7	11.6	10.7	9.9	9.2	8.7	8.2	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.4	5.3	5.1	4.9	4.8	4.7	4.5	4.4	4.3	4.2	80
90	25.7	21.6	18.6	16.4	14.6	13.2	12.1	11.2	10.4	9.7	9.1	8.5	8.1	7.7	7.3	7.0	6.7	6.4	6.2	5.9	5.7	5.5	5.4	5.2	5.0	4.9	4.8	4.6	4.5	4.4	90
100	26.8	22.5	19.4	17.1	15.3	13.8	12.6	11.6	10.8	10.1	9.5	8.9	8.5	8.0	7.7	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.5	5.3	5.1	5.0	4.9	4.8	4.6	100
120	29.0	24.3	21.0	18.5	16.5	15.0	13.7	12.6	11.7	11.0	10.3	9.7	9.2	8.7	8.3	8.0	7.6	7.3	7.1	6.8	6.6	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.1	120
140	31.1	26.1	22.5	19.9	17.8	16.1	14.8	13.6	12.7	11.8	11.1	10.5	10.0	9.5	9.0	8.6	8.3	7.9	7.7	7.4	7.1	6.9	6.7	6.5	6.3	6.1	6.0	5.8	5.7	5.5	140
160	33.3	27.9	24.1	21.3	19.1	17.3	15.8	14.6	13.6	12.7	12.0	11.3	10.7	10.2	9.7	9.3	8.9	8.6	8.2	8.0	7.7	7.4	7.2	7.0	6.8	6.6	6.5	6.3	6.1	6.0	160
180	35.4	29.7	25.7	22.7	20.3	18.4	16.9	15.6	14.5	13.6	12.8	12.1	11.4	10.9	10.4	9.9	9.5	9.2	8.8	8.5	8.2	8.0	7.7	7.5	7.3	7.1	6.9	6.8	6.6	6.5	180
200	37.6	31.6	27.3	24.1	21.6	19.6	18.0	16.6	15.4	14.5	13.6	12.8	12.2	11.6	11.1	10.6	10.2	9.8	9.4	9.1	8.8	8.5	8.3	8.0	7.8	7.6	7.4	7.2	7.1	6.9	200
220	39.7	33.4	28.9	25.5	22.8	20.7	19.0	17.6	16.4	15.3	14.4	13.6	12.9	12.3	11.8	11.3	10.8	10.4	10.0	9.7	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.4	220
240	41.8	35.2	30.4	26.9	24.1	21.9	20.1	18.6	17.3	16.2	15.2	14.4	13.7	13.0	12.4	11.9	11.4	11.0	10.6	10.3	9.9	9.6	9.3	9.1	8.8	8.6	8.4	8.2	8.0	7.8	240
260	44.0	37.0	32.0	28.3	25.4	23.0	21.1	19.6	18.2	17.1	16.1	15.2	14.4	13.7	13.1	12.6	12.1	11.6	11.2	10.8	10.5	10.2	9.9	9.6	9.3	9.1	8.9	8.7	8.5	8.3	260
280	46.1	38.8	33.6	29.7	26.6	24.2	22.2	20.5	19.1	17.9	16.9	16.0	15.2	14.5	13.8	13.2	12.7	12.2	11.8	11.4	11.0	10.7	10.4	10.1	9.8	9.6	9.3	9.1	8.9	8.7	280
300	48.3	40.6	35.2	31.1	27.9	25.4	23.3	21.5	20.1	18.8	17.7	16.8	15.9	15.2	14.5	13.9	13.3	12.9	12.4	12.0	11.6	11.2	10.9	10.6	10.3	10.1	9.8	9.6	9.4	9.2	300
320	50.4	42.5	36.8	32.5	29.2	26.5	24.3	22.5	21.0	19.7	18.5	17.5	16.7	15.9	15.2	14.6	14.0	13.5	13.0	12.6	12.2	11.8	11.5	11.1	10.9	10.6	10.3	10.1	9.8	9.6	320
340	52.6	44.3	38.3	33.9	30.4	27.7	25.4	23.5	21.9	20.5	19.4	18.3	17.4	16.6	15.9	15.2	14.6	14.1	13.6	13.1	12.7	12.3	12.0	11.7	11.3	11.1	10.8	10.5	10.3	10.1	340
360	54.7	46.1	39.9	35.3	31.7	28.8	26.5	24.5	22.8	21.4	20.2	19.1	18.2	17.3	16.5	15.9	15.3	14.7	14.2	13.7	13.3	12.9	12.5	12.2	11.8	11.5	11.3	11.0	10.8	10.5	360
380	56.9	47.9	41.5	36.7	33.0	30.0	27.5	25.5	23.8	22.3	21.0	19.9	18.9	18.0	17.2	16.5	15.9	15.3	14.8	14.3	13.8	13.4	13.0	12.7	12.4	12.0	11.8	11.5	11.2	11.0	380
400	59.0	49.7	43.1	38.1	34.2	31.1	28.6	26.5	24.7	23.2	21.8	20.7	19.6	18.7	17.9	17.2	16.5	15.9	15.4	14.9	14.4	14.0	13.6	13.2	12.9	12.5	12.2	12.0	11.7	11.4	400
420	61.2	51.5	44.7	39.5	35.5	32.3	29.7	27.5	25.6	24.0	22.7	21.5	20.4	19.4	18.6	17.8	17.2	16.5	16.0	15.4	15.0	14.5	14.1	13.7	13.4	13.0	12.7	12.4	12.2	12.0	420
440	63.3	53.3	46.2	40.9	36.8	33.4	30.7	28.5	26.5	24.9	23.5	22.2	21.1	20.2	19.3	18.5	17.8	17.1	16.6	16.0	15.5	15.1	14.6	14.2	13.9	13.5	13.2	12.9	12.6	12.3	440
460	65.5	55.2	47.8	42.3	38.0	34.6	31.8	29.4	27.5	25.8	24.3	23.0	21.9	20.9	20.0	19.2	18.4	17.8	17.1	16.6	16.1	15.6	15.2	14.7	14.4	14.0	13.7	13.4	13.1	12.8	460
480	67.6	57.0	49.4	43.7	39.3	35.7	32.8	30.4	28.4	26.6	25.1	23.8	22.6	21.6	20.7	19.8	19.1	18.4	17.7	17.2	16.6	16.1	15.7	15.3	14.9	14.5	14.2	13.8	13.5	13.3	480
500	69.7	58.8	51.0	45.1	40.5	36.9	33.9	31.4	29.3	27.5	25.9	24.6	23.4	22.3	21.3	20.5	19.7	19.0	18.3	17.7	17.2	16.7	16.2	15.8	15.4	15.0	14.6	14.3	14.0	13.7	500
600	80.5	67.9	58.9	52.1	46.9	42.7	39.2	36.4	33.9	31.9	30.1	28.5	27.1	25.9	24.8	23.8	22.9	22.0	21.3	20.6	20.0	19.4	18.9	18.4	17.9	17.5	17.1	16.7	16.3	16.0	600
700	91.2	77.0	66.8	59.1	53.2	48.4	44.6	41.3	38.6	36.2	34.2	32.4	30.8	29.4	28.2	27.1	26.0	25.1	24.3	23.5	22.8	22.1	21.5	20.9	20.4	19.9	19.5	19.0	18.6	18.2	700
800	101.9	86.0	74.7	66.1	59.5	54.2	49.9	46.3	43.2	40.6	38.3	36.3	34.6	33.0	31.6	30.3	29.2	28.2	27.2	26.4	25.6	24.8	24.2	23.5	22.9	22.4	21.9	21.4	20.9	20.5	800
900	112.7	95.1	82.6	73.2	65.8	60.0	55.2	51.2	47.8	44.9	42.4	40.2	38.3	36.6	35.0	33.6	32.4	31.2	30.2	29.2	28.4	27.6	26.8	26.1	25.5	24.9	24.3	23.8	23.3	22.8	900
1000	123.4	104.2	90.5	80.2	72.2	65.8	60.5	56.1	52.4	49.3	46.5	44.1	42.0	40.1	38.4	36.9	35.6	34.3	33.2	32.1	31.2	30.3	29.5	28.7	28.0	27.3	26.7	26.1	25.6	25.1	1000
1100	134.1	113.3	98.4	87.2	78.5	71.8	65.8	61.1	57.1	53.6	50.7	48.0	45.7	43.7	41.9	40.2	38.7	37.4	36.1	35.0	34.0	33.0	32.1	31.3	30.5	29.8	29.1	28.5	27.9	27.3	1100
1200	144.9	122.3	106.2	94.2	84.8	77.3	71.1	66.0	61.7	58.0	54.8	52.0	49.5	47.3	45.3	43.5	41.9	40.4	39.0	37.9	36.7	35.7	34.7	33.9	33.0	32.2	31.5	30.8	30.2	29.6	1200
1300	155.6	131.4	114.1	101.2	91.1	83.1	76.5	71.0	66.3	62.3	58.9	55.9	53.2	50.8	48.7	46.8	45.1	43.5	42.1	40.8	39.5	38.4	37.4	36.4	35.5	34.7	33.9	33.2	32.5	31.9	1300
1400	166.3	140.5	122.0	108.2	97.4	88.8	81.8	75.9	70.9	66.7	63.0	60.0	56.9	54.4	52.1	50.1	48.2	46.6	45.0	43.6	42.3	41.1	40.0	39.0	38.1	37.2	36.3	35.6	34.8	34.1	1400
1500	177.1	149.6	129.9	115.2	103.8	94.6	87.1	80.9	75.6	71.0	67.1	63.7	60.7	58.0	55.5	53.4	51.4	49.6	48.0	46.5	45.1	43.9	42.7	41.6	40.6	39.6	38.7	37.9	37.1	36.4	1500
Term. 2/	16.090	13.408	11.493	10.056	8.939	8.045	7.314	6.704	6.188	5.746	5.363	5.028	4.732	4.469	4.234	4.023	3.831	3.657	3.498	3.352	3.218	3.094	2.980	2.873	2.774	2.682	2.595	2.514	2.438	2.366	Term. 2/
L. H. 3/	.107310	.090775	.078964	.070106	.063217	.057705	.053195	.049438	.046258	.043532	.041170	.039103	.037279	.035658	.034208	.032903	.031721	.030648	.029667	.028769	.027942	.027179	.026472	.025816	.025205	.024635	.024102	.023602	.023132	.022690	L. H. 3/

1/ Based on a tare weight of 19.0 tons and a ratio of empty car miles to loaded car miles of 0.789. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.16.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.30.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 37 (Concluded).—TERRITORY NO. 6 - SOUTHERN

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4	10
20	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	20
30	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	30
40	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	40
50	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	50
60	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	60
70	3.9	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	70
80	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	80
90	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	90
100	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	100
120	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	120
140	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	140
160	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	160
180	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	180
200	6.8	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	200
220	7.2	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	220
240	7.6	7.5	7.3	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.3	5.2	5.2	5.1	5.1	240
260	8.1	7.9	7.8	7.6	7.5	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.4	260
280	8.5	8.4	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	6.0	5.9	5.9	5.8	5.7	5.7	280
300	9.0	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	300
320	9.4	9.2	9.1	8.9	8.7	8.6	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.6	6.5	6.5	6.4	6.3	320
340	9.9	9.7	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.8	6.7	6.6	340
360	10.3	10.1	9.9	9.7	9.6	9.4	9.2	9.1	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.2	7.1	7.0	7.0	360
380	10.8	10.5	10.3	10.2	10.0	9.8	9.6	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.2	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.3	7.3	380
400	11.2	11.0	10.8	10.6	10.4	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.8	7.7	7.7	7.6	400
420	11.7	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.0	7.9	420
440	12.1	11.9	11.6	11.4	11.2	11.0	10.8	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.5	8.4	8.3	8.2	440
460	12.5	12.3	12.1	11.8	11.6	11.4	11.3	11.1	10.9	10.7	10.6	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	9.0	8.9	8.8	8.7	8.6	8.5	460
480	13.0	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	480
500	13.4	13.2	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.2	11.0	10.9	10.8	10.6	10.5	10.4	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.3	9.2	500
600	15.7	15.4	15.1	14.8	14.6	14.3	14.1	13.9	13.7	13.5	13.3	13.1	12.9	12.7	12.6	12.4	12.3	12.1	12.0	11.9	11.7	11.6	11.5	11.4	11.3	11.2	11.1	11.0	10.9	10.8	600
700	17.9	17.6	17.2	16.9	16.6	16.4	16.1	15.9	15.6	15.4	15.2	15.0	14.8	14.6	14.4	14.2	14.1	13.9	13.7	13.6	13.4	13.3	13.2	13.0	12.9	12.8	12.7	12.6	12.5	12.4	700
800	20.1	19.7	19.4	19.0	18.7	18.4	18.1	17.8	17.6	17.3	17.1	16.9	16.6	16.4	16.2	16.0	15.8	15.7	15.5	15.3	15.2	15.0	14.9	14.7	14.6	14.4	14.3	14.2	14.1	13.9	800
900	22.3	21.9	21.5	21.2	20.8	20.5	20.1	19.8	19.5	19.3	19.0	18.7	18.5	18.3	18.0	17.8	17.6	17.4	17.2	17.0	16.9	16.7	16.5	16.4	16.2	16.1	15.9	15.8	15.7	15.5	900
1000	24.6	24.1	23.7	23.3	22.9	22.5	22.2	21.8	21.5	21.2	20.9	20.6	20.4	20.1	19.9	19.6	19.4	19.2	19.0	18.8	18.6	18.4	18.2	18.0	17.9	17.7	17.6	17.4	17.3	17.1	1000
1100	26.8	26.3	25.8	25.4	25.0	24.6	24.2	23.8	23.5	23.1	22.8	22.5	22.2	22.0	21.7	21.4	21.2	20.9	20.7	20.5	20.3	20.1	19.9	19.7	19.5	19.3	19.2	19.0	18.8	18.7	1100
1200	29.0	28.5	28.0	27.5	27.0	26.6	26.2	25.8	25.4	25.1	24.7	24.4	24.1	23.8	23.5	23.2	23.0	22.7	22.5	22.2	22.0	21.8	21.6	21.4	21.2	21.0	20.8	20.6	20.4	20.3	1200
1300	31.3	30.7	30.1	29.6	29.1	28.7	28.2	27.8	27.4	27.0	26.6	26.3	26.0	25.6	25.3	25.0	24.8	24.5	24.2	24.0	23.7	23.5	23.3	23.0	22.8	22.6	22.4	22.2	22.0	21.9	1300
1400	33.5	32.9	32.3	31.7	31.2	30.7	30.2	29.8	29.4	29.0	28.6	28.2	27.8	27.5	27.2	26.8	26.5	26.2	26.0	25.7	25.4	25.2	24.9	24.7	24.5	24.3	24.0	23.8	23.6	23.4	1400
1500	35.7	35.1	34.4	33.8	33.3	32.8	32.3	31.8	31.3	30.9	30.5	30.1	29.7	29.3	29.0	28.6	28.3	28.0	27.7	27.4	27.1	26.9	26.6	26.4	26.1	25.9	25.7	25.4	25.2	25.0	1500
Term. 2/	2.299	2.235	2.174	2.117	2.063	2.011	1.962	1.915	1.871	1.828	1.788	1.749	1.712	1.676	1.642	1.609	1.577	1.547	1.518	1.490	1.463	1.437	1.411	1.387	1.364	1.341	1.319	1.298	1.277	1.257	Term. 2/
L. H. 3/	.022273	.021879	.021507	.021154	.020819	.020501	.020199	.019911	.019636	.019374	.019123	.018884	.018654	.018434	.018223	.018021	.017826	.017639	.017459	.017286	.017119	.016958	.016803	.016653	.016508	.016368	.016232	.016101	.015974	.015851	L. H. 3/

1/ Based on a tare weight of 19.0 tons and a ratio of empty car miles to loaded car miles of 0.789. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.16.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 6 - Southern

GONDOLA AND HOPPER CARS

TABLE 38.—TERRITORY NO. 6 - SOUTHERN

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.3	14.4	12.4	10.8	9.6	8.7	7.9	7.3	6.7	6.2	5.8	5.5	5.1	4.9	4.6	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	10
20	18.5	15.5	13.3	11.6	10.4	9.3	8.5	7.8	7.2	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.5	4.3	4.2	4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.9	20
30	19.7	16.5	14.2	12.4	11.1	10.0	9.1	8.4	7.7	7.2	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	30
40	20.9	17.5	15.1	13.2	11.8	10.6	9.7	8.9	8.3	7.7	7.2	6.8	6.4	6.1	5.7	5.5	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.6	3.5	3.4	3.4	40
50	22.2	18.5	15.9	14.0	12.5	11.3	10.3	9.5	8.8	8.2	7.7	7.2	6.8	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.8	4.6	4.4	4.3	4.2	4.0	3.9	3.8	3.7	3.6	50
60	23.4	19.6	16.8	14.8	13.2	11.9	10.9	10.0	9.3	8.7	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.1	4.0	3.9	60
70	24.6	20.6	17.7	15.6	13.9	12.6	11.5	10.6	9.8	9.1	8.6	8.1	7.6	7.2	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	4.1	70
80	25.8	21.6	18.6	16.4	14.6	13.2	12.1	11.1	10.3	9.6	9.0	8.5	8.0	7.6	7.3	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.5	4.3	80
90	27.0	22.6	19.5	17.2	15.3	13.9	12.7	11.7	10.8	10.1	9.5	8.9	8.5	8.0	7.6	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.8	4.7	4.6	90
100	28.2	23.7	20.4	17.9	16.0	14.5	13.3	12.2	11.4	10.6	9.9	9.4	8.9	8.4	8.0	7.7	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	5.0	4.8	100
120	30.6	25.7	22.2	19.5	17.5	15.8	14.5	13.3	12.4	11.6	10.9	10.2	9.7	9.2	8.8	8.4	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.1	5.9	5.8	5.6	5.5	5.3	120
140	33.1	27.7	23.9	21.1	18.9	17.1	15.7	14.4	13.4	12.5	11.8	11.1	10.5	10.0	9.5	9.1	8.7	8.4	8.1	7.8	7.5	7.3	7.0	6.8	6.6	6.5	6.3	6.1	6.0	5.8	140
160	35.5	29.8	25.7	22.7	20.3	18.4	16.8	15.5	14.4	13.5	12.7	12.0	11.4	10.8	10.3	9.8	9.4	9.1	8.7	8.4	8.1	7.9	7.6	7.4	7.2	7.0	6.8	6.6	6.5	6.3	160
180	37.9	31.8	27.5	24.2	21.7	19.7	18.0	16.7	15.5	14.5	13.6	12.9	12.2	11.6	11.1	10.6	10.1	9.7	9.4	9.1	8.8	8.5	8.2	8.0	7.7	7.5	7.3	7.2	7.0	6.8	180
200	40.3	33.9	29.3	25.8	23.1	21.0	19.2	17.8	16.5	15.5	14.5	13.7	13.0	12.4	11.8	11.3	10.8	10.4	10.0	9.7	9.4	9.1	8.8	8.5	8.3	8.1	7.9	7.7	7.5	7.3	200
220	42.8	35.9	31.1	27.4	24.6	22.3	20.4	18.9	17.5	16.4	15.4	14.6	13.8	13.2	12.6	12.0	11.5	11.1	10.7	10.3	10.0	9.7	9.4	9.1	8.8	8.6	8.4	8.2	8.0	7.8	220
240	45.2	38.0	32.8	29.0	26.0	23.6	21.6	20.0	18.6	17.4	16.4	15.5	14.7	14.0	13.3	12.8	12.2	11.8	11.3	11.0	10.6	10.3	10.0	9.7	9.4	9.2	8.9	8.7	8.5	8.3	240
260	47.6	40.0	34.6	30.6	27.4	24.9	22.8	21.1	19.6	18.4	17.3	16.3	15.5	14.7	14.1	13.5	12.9	12.5	12.0	11.6	11.2	10.9	10.5	10.2	10.0	9.7	9.4	9.2	9.0	8.8	260
280	50.1	42.1	36.4	32.1	28.8	26.2	24.0	22.2	20.6	19.3	18.2	17.2	16.3	15.5	14.8	14.2	13.6	13.1	12.7	12.2	11.8	11.5	11.1	10.8	10.5	10.2	10.0	9.7	9.5	9.3	280
300	52.5	44.1	38.2	33.7	30.2	27.5	25.2	23.3	21.7	20.3	19.1	18.1	17.1	16.3	15.6	14.9	14.3	13.8	13.3	12.9	12.4	12.1	11.7	11.4	11.1	10.8	10.5	10.2	10.0	9.8	300
320	54.9	46.2	40.0	35.3	31.7	28.7	26.4	24.4	22.7	21.3	20.0	18.9	18.0	17.1	16.4	15.7	15.0	14.5	14.0	13.5	13.1	12.7	12.3	11.9	11.6	11.3	11.0	10.8	10.5	10.3	320
340	57.3	48.2	41.7	36.9	33.1	30.0	27.6	25.5	23.7	22.2	20.9	19.8	18.8	17.9	17.1	16.4	15.7	15.2	14.6	14.1	13.7	13.2	12.9	12.5	12.2	11.9	11.6	11.3	11.0	10.8	340
360	59.8	50.3	43.5	38.4	34.5	31.3	28.8	26.6	24.8	23.2	21.9	20.7	19.6	18.7	17.9	17.1	16.4	15.8	15.3	14.8	14.3	13.8	13.4	13.1	12.7	12.4	12.1	11.8	11.5	11.3	360
380	62.2	52.3	45.3	40.0	35.9	32.6	29.9	27.7	25.8	24.2	22.8	21.5	20.5	19.5	18.6	17.9	17.2	16.5	15.9	15.4	14.9	14.4	14.0	13.6	13.3	12.9	12.6	12.3	12.0	11.8	380
400	64.6	54.4	47.1	41.6	37.3	33.9	31.1	28.8	26.8	25.2	23.7	22.4	21.3	20.3	19.4	18.6	17.9	17.2	16.6	16.0	15.5	15.0	14.6	14.2	13.8	13.5	13.1	12.8	12.5	12.3	400
420	67.0	56.4	48.9	43.2	38.8	35.2	32.3	29.9	27.9	26.1	24.6	23.3	22.1	21.1	20.1	19.3	18.6	17.9	17.2	16.7	16.1	15.6	15.2	14.8	14.4	14.0	13.7	13.3	13.0	12.8	420
440	69.5	58.5	50.6	44.7	40.2	36.5	33.5	31.0	28.9	27.1	25.5	24.2	22.9	21.9	20.9	20.0	19.3	18.5	17.9	17.3	16.7	16.2	15.8	15.3	14.9	14.5	14.2	13.9	13.5	13.3	440
460	71.9	60.5	52.4	46.3	41.6	37.8	34.7	32.1	29.9	28.1	26.4	25.0	23.8	22.7	21.7	20.8	20.0	19.2	18.5	17.9	17.4	16.8	16.3	15.9	15.5	15.1	14.7	14.4	14.1	13.7	460
480	74.3	62.6	54.2	47.9	43.0	39.1	35.9	33.2	31.0	29.0	27.4	25.9	24.6	23.4	22.4	21.5	20.7	19.9	19.2	18.6	18.0	17.4	16.9	16.5	16.0	15.6	15.2	14.9	14.6	14.2	480
500	76.7	64.6	56.0	49.5	44.4	40.4	37.1	34.3	32.0	30.0	28.3	26.8	25.4	24.2	23.2	22.2	21.4	20.6	19.9	19.2	18.6	18.0	17.5	17.0	16.6	16.2	15.8	15.4	15.1	14.7	500
600	88.9	74.9	64.9	57.4	51.5	46.9	43.0	39.9	37.2	34.9	32.9	31.1	29.6	28.2	27.0	25.9	24.9	24.0	23.1	22.4	21.7	21.0	20.4	19.9	19.3	18.9	18.4	18.0	17.6	17.2	600
700	101.0	85.1	73.8	65.2	58.6	53.3	49.0	45.4	42.3	39.7	37.4	35.5	33.7	32.1	30.8	29.5	28.4	27.3	26.4	25.5	24.7	24.0	23.3	22.7	22.1	21.6	21.0	20.6	20.1	19.7	700
800	113.1	95.3	82.7	73.1	65.7	59.8	55.0	50.9	47.5	44.6	42.0	39.8	37.8	36.1	34.5	33.1	31.9	30.7	30.0	28.7	27.8	27.0	26.2	25.5	24.9	24.3	23.7	23.1	22.6	22.2	800
900	125.3	105.6	91.5	81.0	72.8	66.3	60.9	56.4	52.7	49.4	46.6	44.2	42.0	40.1	38.3	36.8	35.4	34.1	32.9	31.9	30.9	30.0	29.1	28.4	27.6	27.0	26.3	25.7	25.2	24.6	900
1000	137.4	115.8	100.4	88.9	79.9	72.7	66.9	62.0	57.8	54.3	51.2	48.5	46.1	44.0	42.1	40.4	38.9	37.5	36.2	35.0	34.0	33.0	32.0	31.2	30.4	29.6	29.0	28.3	27.7	27.1	1000
1100	149.5	126.1	109.3	96.8	87.0	79.2	72.8	67.5	63.0	59.1	55.8	52.8	50.3	48.0	45.9	44.1	42.4	40.9	39.5	38.2	37.0	35.9	34.9	34.0	33.2	32.3	31.6	30.9	30.2	30.0	1100
1200	161.6	136.3	118.2	104.7	94.1	85.7	78.8	73.0	68.2	64.0	60.4	57.2	54.4	51.9	49.7	47.7	45.9	44.2	42.7	41.4	40.1	38.9	37.9	36.8	35.9	35.0	34.2	33.5	32.7	32.1	1200
1300	173.8	146.6	127.1	112.6	101.2	92.1	84.7	78.5	73.3	68.8	64.9	61.5	58.5	55.9	53.5	51.3	49.4	47.6	46.0	44.5	43.2	41.9	40.8	40.0	38.7	37.7	36.9	36.0	35.3	34.5	1300
1400	185.9	156.8	136.0	120.4	108.3	98.6	90.7	84.1	78.5	73.7	69.5	65.9	62.7	59.8	57.3	55.0	52.9	51.0	49.3	47.7	46.3	44.9	43.7	42.5	41.4	40.4	39.5	38.6	37.8	37.0	1400
1500	198.0	167.0	144.9	128.3	115.4	105.1	96.6	89.6	83.6	78.5	74.1	70.2	66.8	63.8	61.1	58.6	56.4	54.4	52.6	50.9	49.3	47.9	46.6	45.3	44.2	43.1	42.1	41.2	40.3	39.5	1500
Term. 2/	16.090	13.408	11.493	10.056	8.939	8.045	7.314	6.704	6.188	5.746	5.363	5.028	4.732	4.469	4.234	4.023	3.831	3.657	3.498	3.352	3.218	3.094	2.980	2.873	2.774	2.682	2.595	2.514	2.438	2.366	Term. 2
L. H. 3/	.121290	.102425	.088950	.078844	.070983	.064695	.059550	.055263	.051635	.048525	.045830	.043472	.041391	.039542	.037887	.036398	.035050	.033825	.032707	.031681	.030738	.029867	.029061	.028313	.027616	.026965	.026356	.025786	.025250	.024746	L. H. 3

1/ Based on a tare weight of 21.2 tons and a ratio of empty car miles to loaded car miles of 0.918. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.16.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 38 (Concluded).—TERRITORY NO. 6 - SOUTHERN

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4	10
20	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	20
30	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	30
40	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	40
50	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	50
60	3.8	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	60
70	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	70
80	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	80
90	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	90
100	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	100
120	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.1	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	120
140	5.7	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	140
160	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.6	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	160
180	6.7	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.4	4.3	180
200	7.2	7.0	6.9	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	200
220	7.6	7.5	7.3	7.2	7.0	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.3	5.2	5.1	5.1	5.0	5.0	220
240	8.1	8.0	7.8	7.6	7.5	7.4	7.2	7.1	7.0	6.9	6.8	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.4	5.3	240
260	8.6	8.4	8.3	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	6.9	6.8	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.7	260
280	9.1	8.9	8.7	8.6	8.4	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	280
300	9.6	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	6.3	300
320	10.1	9.9	9.7	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	320
340	10.6	10.3	10.1	9.9	9.8	9.6	9.4	9.3	9.1	9.0	8.8	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.2	7.1	7.0	340
360	11.0	10.8	10.6	10.4	10.2	10.0	9.8	9.7	9.5	9.4	9.2	9.1	9.0	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	7.4	360
380	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	380
400	12.0	11.8	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	8.0	400
420	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.2	10.0	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.5	8.4	420
440	13.0	12.7	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.7	10.6	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.6	9.4	9.3	9.2	9.1	9.1	9.0	8.9	8.8	8.7	440
460	13.5	13.2	12.9	12.7	12.5	12.2	12.0	11.8	11.7	11.5	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.1	460
480	13.9	13.7	13.4	13.2	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.4	11.2	11.1	10.9	10.8	10.7	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	480
500	14.4	14.1	13.9	13.6	13.4	13.1	12.9	12.7	12.5	12.3	12.1	12.0	11.8	11.6	11.5	11.3	11.2	11.0	10.9	10.8	10.7	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	500
600	16.9	16.5	16.2	15.9	15.6	15.4	15.1	14.9	14.6	14.4	14.2	14.0	13.8	13.6	13.4	13.3	13.1	12.9	12.8	12.6	12.5	12.4	12.2	12.1	12.0	11.9	11.7	11.6	11.5	11.4	600
700	19.3	18.9	18.6	18.2	17.9	17.6	17.3	17.0	16.8	16.5	16.3	16.0	15.8	15.6	15.4	15.2	15.0	14.8	14.7	14.5	14.3	14.2	14.0	13.9	13.7	13.6	13.5	13.4	13.2	13.1	700
800	21.7	21.3	20.9	20.5	20.2	19.8	19.5	19.2	18.9	18.6	18.3	18.1	17.8	17.6	17.4	17.1	16.9	16.7	16.5	16.4	16.2	16.0	15.8	15.7	15.5	15.4	15.2	15.1	14.9	14.8	800
900	24.1	23.7	23.2	22.8	22.4	22.0	21.7	21.3	21.0	20.7	20.4	20.1	19.8	19.6	19.3	19.1	18.9	18.6	18.4	18.2	18.0	17.8	17.6	17.5	17.3	17.1	17.0	16.8	16.7	16.5	900
1000	26.6	26.1	25.6	25.1	24.7	24.3	23.9	23.5	23.1	22.8	22.5	22.2	21.9	21.6	21.3	21.0	20.8	20.5	20.3	20.1	19.9	19.6	19.4	19.2	19.1	18.9	18.7	18.5	18.4	18.2	1000
1100	29.0	28.4	27.9	27.4	26.9	26.5	26.1	25.6	25.3	24.9	24.5	24.2	23.9	23.6	23.3	23.0	22.7	22.4	22.2	21.9	21.7	21.5	21.2	21.0	20.8	20.6	20.4	20.2	20.1	19.9	1100
1200	31.4	30.8	30.2	29.7	29.2	28.7	28.2	27.8	27.4	27.0	26.6	26.2	25.9	25.5	25.2	24.9	24.6	24.3	24.1	23.8	23.5	23.3	23.0	22.8	22.6	22.4	22.2	22.0	21.8	21.6	1200
1300	34.9	33.2	32.6	32.0	31.5	30.9	30.4	30.0	29.5	29.1	28.7	28.3	27.9	27.5	27.2	26.9	26.5	26.2	25.9	25.6	25.4	25.1	24.8	24.6	24.4	24.1	23.9	23.7	23.5	23.3	1300
1400	36.3	35.6	34.9	34.3	33.7	33.2	32.6	32.1	31.6	31.2	30.7	30.3	29.9	29.5	29.2	28.8	28.5	28.1	27.8	27.5	27.2	26.9	26.7	26.4	26.1	25.9	25.6	25.4	25.2	25.0	1400
1500	38.7	38.0	37.3	36.6	36.0	35.4	34.8	34.3	33.8	33.3	32.8	32.4	31.9	31.5	31.1	30.7	30.4	30.0	29.7	29.4	29.0	28.7	28.5	28.2	27.9	27.6	27.4	27.1	26.9	26.7	1500
Term. 2/	2.299	2.235	2.174	2.117	2.063	2.011	1.962	1.915	1.871	1.828	1.788	1.749	1.712	1.676	1.642	1.609	1.577	1.547	1.518	1.490	1.463	1.437	1.411	1.387	1.364	1.341	1.319	1.298	1.277	1.257	Term. 2/
L. H. 3/	.024270	.023821	.023396	.022993	.022612	.022249	.021904	.021575	.021262	.020963	.020677	.020403	.020141	.019891	.019650	.019419	.019197	.018984	.018778	.018581	.018390	.018206	.018029	.017858	.017692	.017533	.017378	.017228	.017083	.016943	L. H. 3/

1/ Based on a tare weight of 21.2 tons and a ratio of empty car miles to loaded car miles of 0.918. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.16.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 39.--TERRITORY NO. 6 - SOUTHERN

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	15.4	12.8	11.0	9.6	8.6	7.7	7.0	6.5	6.0	5.5	5.2	4.9	4.6	4.3	4.1	3.9	3.7	3.6	3.4	3.3	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.3	10
20	16.8	14.0	12.0	10.5	9.4	8.5	7.7	7.1	6.6	6.1	5.7	5.4	5.0	4.8	4.5	4.3	4.1	3.9	3.8	3.6	3.5	3.4	3.2	3.1	3.0	2.9	2.8	2.8	2.7	2.6	20
30	18.2	15.2	13.0	11.4	10.2	9.2	8.4	7.7	7.1	6.6	6.2	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	3.0	2.9	30
40	19.6	16.3	14.1	12.3	11.0	9.9	9.1	8.3	7.7	7.2	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.2	40
50	20.9	17.3	15.1	13.2	11.8	10.7	9.7	9.0	8.3	7.7	7.3	6.8	6.4	6.1	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	50
60	22.3	18.7	16.1	14.1	12.6	11.4	10.4	9.6	8.9	8.3	7.8	7.3	6.9	6.6	6.2	5.9	5.7	5.5	5.2	5.0	4.9	4.7	4.5	4.4	4.3	4.1	4.0	3.9	3.8	3.7	60
70	23.7	19.9	17.1	15.0	13.4	12.1	11.1	10.2	9.5	8.8	8.3	7.8	7.4	7.0	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	4.1	4.0	70
80	25.1	21.0	18.1	15.9	14.2	12.9	11.8	10.8	10.1	9.4	8.8	8.3	7.8	7.4	7.1	6.8	6.5	6.2	6.0	5.7	5.5	5.4	5.2	5.0	4.9	4.7	4.6	4.5	4.4	4.2	80
90	26.5	22.2	19.1	16.8	15.0	13.6	12.4	11.5	10.6	9.9	9.3	8.8	8.3	7.9	7.5	7.2	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.8	4.6	4.5	90
100	27.9	23.4	20.2	17.7	15.9	14.4	13.1	12.1	11.2	10.5	9.8	9.3	8.8	8.3	7.9	7.6	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.0	4.9	4.8	100
120	30.7	25.7	22.2	19.5	17.5	15.8	14.5	13.3	12.4	11.6	10.9	10.3	9.7	9.2	8.8	8.4	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.1	5.9	5.8	5.6	5.5	5.3	120
140	33.4	28.1	24.2	21.3	19.1	17.3	15.8	14.6	13.6	12.7	11.9	11.2	10.6	10.1	9.6	9.2	8.8	8.5	8.2	7.9	7.6	7.3	7.1	6.9	6.7	6.5	6.3	6.2	6.0	5.9	140
160	36.2	30.4	26.2	23.1	20.7	18.8	17.2	15.9	14.7	13.8	12.9	12.2	11.6	11.0	10.[illegible]	10.0	9.6	9.2	8.9	8.6	8.3	8.0	7.8	7.5	7.3	7.1	6.9	6.8	6.6	6.4	160
180	39.0	32.7	28.3	24.9	22.3	20.2	18.5	17.1	15.9	14.9	14.0	13.2	12.5	12.0	11[illegible]	10.8	10.4	10.0	9.6	9.3	9.0	8.7	8.4	8.2	7.9	7.7	7.5	7.3	7.1	7.0	180
200	41.8	35.1	30.3	26.7	23.9	21.7	19.9	18.4	17.1	16.0	15.0	14.2	13.4	12.8	12.[illegible]	11.7	11.2	10.7	10.4	10.0	9.7	9.3	9.1	8.8	8.5	8.3	8.1	7.9	7.7	7.5	200
220	44.6	37.4	32.3	28.5	25.6	23.2	21.2	19.6	18.2	17.1	16.0	15.2	14.4	13.7	13.0	12.5	12.0	11.5	11.1	10.7	10.3	10.0	9.7	9.4	9.2	8.9	8.7	8.5	8.3	8.1	220
240	47.3	39.8	34.4	30.3	27.2	24.6	22.6	20.9	19.4	18.2	17.1	16.1	15.3	14.6	13.9	13.3	12.8	12.3	11.8	11.4	11.0	10.7	10.4	10.1	9.8	9.5	9.3	9.0	8.8	8.6	240
260	50.1	42.1	36.4	32.1	28.8	26.1	23.9	22.1	20.6	19.3	18.1	17.1	16.2	15.4	14.7	14.1	13.5	13.0	12.5	12.1	11.7	11.3	11.0	10.7	10.4	10.1	9.9	9.6	9.4	9.2	260
280	52.9	44.5	38.4	33.9	30.4	27.6	25.3	23.4	21.7	20.4	19.1	18.1	17.2	16.3	15.6	14.9	14.3	13.8	13.3	12.8	12.4	12.0	11.6	11.3	11.0	10.7	10.4	10.2	9.9	9.7	280
300	55.7	46.8	40.5	35.7	32.0	29.1	26.6	24.6	22.9	21.4	20.2	19.1	18.1	17.2	16.4	15.7	15.1	14.5	14.0	13.5	13.1	12.7	12.3	11.9	11.6	11.3	11.0	10.8	10.5	10.3	300
320	58.5	49.1	42.5	37.5	33.6	30.5	28.0	25.9	24.1	22.5	21.2	20.1	19.0	18.1	17.3	16.6	15.9	15.3	14.7	14.2	13.8	13.3	12.9	12.6	12.2	11.9	11.6	11.3	11.1	10.8	320
340	61.2	51.5	44.4	39.3	35.2	32.0	29.3	27.1	25.2	23.6	22.2	21.0	20.0	19.0	18.1	17.4	16.7	16.0	15.5	14.9	14.5	14.0	13.6	13.2	12.8	12.5	12.2	11.9	11.6	11.4	340
360	64.0	53.8	46.6	41.1	36.9	33.5	30.7	28.4	26.4	24.7	23.3	22.0	20.9	19.9	19.0	18.2	17.5	16.8	16.2	15.6	15.1	14.7	14.2	13.8	13.5	13.1	12.8	12.5	12.2	11.9	360
380	66.8	56.2	48.6	42.9	38.5	34.9	32.0	29.6	27.6	25.8	24.3	23.0	21.8	20.8	19.8	19.0	18.2	17.6	16.9	16.4	15.8	15.3	14.9	14.5	14.1	13.7	13.4	13.0	12.7	12.4	380
400	69.6	58.5	50.6	44.7	40.1	36.4	33.4	30.9	28.8	26.9	25.4	24.0	22.8	21.7	20.7	19.8	19.0	18.3	17.7	17.1	16.5	16.0	15.5	15.1	14.7	14.3	13.9	13.6	13.3	13.0	400
420	72.4	60.9	52.7	46.5	41.7	37.9	34.7	32.1	29.9	28.0	26.4	25.0	23.7	22.6	21.5	20.6	19.8	19.1	18.4	17.8	17.2	16.7	16.2	15.7	15.3	14.9	14.5	14.2	13.8	13.5	420
440	75.1	63.2	54.7	48.3	43.3	39.3	36.1	33.4	31.1	29.1	27.4	25.9	24.6	23.4	22.4	21.5	20.6	19.8	19.1	18.5	17.9	17.3	16.8	16.3	15.9	15.5	15.1	14.7	14.4	14.1	440
460	77.9	65.5	56.7	50.1	44.9	40.8	37.4	34.6	32.3	30.2	28.5	26.9	25.5	24.3	23.2	22.3	21.4	20.6	19.9	19.2	18.6	18.0	17.5	17.0	16.5	16.1	15.7	15.3	15.0	14.6	460
480	80.7	67.9	58.7	51.9	46.6	42.3	38.8	35.9	33.4	31.3	29.5	27.9	26.5	25.2	24.1	23.1	22.2	21.3	20.6	19.9	19.2	18.7	18.1	17.6	17.1	16.7	16.3	15.9	15.5	15.2	480
500	83.5	70.2	60.8	53.7	48.2	43.8	40.2	37.1	34.6	32.4	30.5	28.9	27.4	26.1	25.0	23.9	23.0	22.1	21.3	20.6	19.9	19.3	18.8	18.2	17.7	17.3	16.9	16.5	16.1	15.7	500
600	97.4	81.9	70.9	62.7	56.3	51.1	46.9	43.4	40.4	37.9	35.7	33.8	32.1	30.6	29.2	28.0	26.9	25.9	25.0	24.1	23.4	22.6	22.0	21.4	20.8	20.3	19.8	19.3	18.9	18.5	600
700	111.3	93.7	81.1	71.7	64.3	58.5	53.7	49.7	46.3	43.4	40.9	38.7	36.7	35.0	33.5	32.1	30.8	29.7	28.6	27.7	26.8	26.0	25.2	24.5	23.9	23.3	22.7	22.2	21.7	21.2	700
800	125.2	105.4	91.2	80.7	72.4	65.8	60.4	55.9	52.1	48.9	46.0	43.6	41.4	39.4	37.7	36.1	34.7	33.5	32.3	31.2	30.2	29.3	28.5	27.7	26.9	26.3	25.6	25.0	24.5	23.9	800
900	139.1	117.1	101.4	89.6	80.5	73.2	67.2	62.2	58.0	54.3	51.2	48.5	46.0	43.9	42.0	40.2	38.7	37.2	35.9	34.7	33.6	32.6	31.7	30.8	30.0	29.3	28.5	27.9	27.3	26.7	900
1000	152.9	128.8	111.6	98.6	88.6	80.5	73.9	68.5	63.8	59.8	56.4	53.4	50.7	48.3	46.2	44.3	42.6	41.0	39.6	38.3	37.1	36.0	34.9	34.0	33.1	32.2	31.5	30.7	30.0	29.4	1000
1100	166.8	140.5	121.7	107.6	96.6	87.9	80.7	74.7	69.7	65.3	61.6	58.3	55.4	52.8	50.5	48.4	46.5	44.8	43.2	41.8	40.5	39.3	38.2	37.1	36.1	35.2	34.4	33.6	32.8	32.1	1100
1200	180.7	152.2	131.9	116.6	104.7	95.2	87.5	81.0	75.5	70.8	66.7	63.2	60.0	57.2	54.7	52.5	50.4	48.6	46.9	45.3	43.9	42.6	41.4	[illegible]	39.2	38.2	37.3	36.4	35.6	34.9	1200
1300	194.6	163.9	142.0	125.6	112.8	102.6	94.2	87.2	81.3	76.3	71.9	68.1	64.7	61.7	59.0	56.6	54.4	52.4	50.6	48.9	47.4	45.9	44.6	43.4	42.3	41.2	40.2	39.3	38.4	37.6	1300
1400	208.5	175.7	152.2	134.6	120.9	109.9	101.0	93.5	87.2	81.8	77.1	73.0	69.3	66.1	63.2	60.6	58.3	56.2	54.2	52.4	50.8	49.3	47.9	46.6	45.3	44.2	43.1	42.2	41.2	40.3	1400
1500	222.4	187.4	162.3	143.6	129.0	117.3	107.7	99.8	93.0	87.2	82.2	77.9	74.0	70.6	67.5	64.7	62.2	59.9	57.9	56.0	54.2	52.6	51.1	49.7	48.4	47.2	46.1	45.0	44.0	43.1	1500
Term. 2/	13.996	11.669	9.997	8.748	7.776	6.998	6.362	5.832	5.383	4.999	4.665	4.374	4.116	3.888	3.683	3.499	3.332	3.181	3.043	2.916	2.799	2.692	2.592	2.499	2.413	2.333	2.257	2.187	2.121	2.058	Term. 2/
L. H. 3/	.138950	.117142	.101564	.089881	.080794	.073525	.067577	.062621	.058427	.054832	.051717	.048991	.046589	.044447	.042534	.040813	.039255	.037839	.036546	.035360	.034270	.033263	.032331	.031466	.030660	.029908	.029205	.028545	.027926	.027343	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.960. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.16.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.30.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 39 (Concluded)---TERRITORY NO. 6 - SOUTHERN

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.3	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.7	1.6	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50	3.3	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.1	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
120	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
140	5.8	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
160	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
180	6.8	6.7	6.5	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
200	7.4	7.2	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
220	7.9	7.7	7.6	7.4	7.3	7.1	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
240	8.4	8.2	8.1	7.9	7.8	7.6	7.5	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
260	9.0	8.8	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
280	9.5	9.3	9.1	8.9	8.8	8.6	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
300	10.0	9.8	9.6	9.4	9.3	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
320	10.6	10.4	10.1	9.9	9.8	9.6	9.4	9.2	9.1	8.9	8.8	8.7	8.5	8.4	8.3	8.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
340	11.1	10.9	10.7	10.4	10.3	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.8	8.7	8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
360	11.6	11.4	11.2	11.0	10.7	10.6	10.4	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.2	9.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
380	12.2	11.9	11.7	11.5	11.2	11.0	10.8	10.7	10.5	10.3	10.2	10.0	9.9	9.7	9.6	9.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
400	12.7	12.5	12.2	12.0	11.7	11.5	11.3	11.1	11.0	10.8	10.6	10.5	10.3	10.2	10.0	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
420	13.3	13.0	12.7	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.7	10.6	10.4	10.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
440	13.8	13.5	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.2	11.0	10.9	10.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
460	14.3	14.0	13.8	13.5	13.2	13.0	12.8	12.6	12.3	12.2	12.0	11.8	11.6	11.5	11.3	11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
480	14.9	14.6	14.3	14.0	13.7	13.5	13.3	13.0	12.8	12.6	12.4	12.2	12.1	11.9	11.7	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
500	15.4	15.1	14.8	14.5	14.2	14.0	13.7	13.5	13.3	13.1	12.9	12.7	12.5	12.3	12.2	12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
600	18.1	17.7	17.4	17.0	16.7	16.4	16.1	15.9	15.6	15.4	15.1	14.9	14.7	14.5	14.3	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
700	20.8	20.3	19.9	19.6	19.2	18.9	18.5	18.2	17.9	17.7	17.4	17.1	16.9	16.7	16.4	16.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
800	23.4	23.0	22.5	22.1	21.7	21.3	21.0	20.6	20.3	20.0	19.7	19.4	19.1	18.8	18.6	18.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
900	26.1	25.6	25.1	24.6	24.2	23.8	23.4	23.0	22.6	22.3	21.9	21.6	21.3	21.0	20.7	20.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
1000	28.8	28.2	27.7	27.2	26.7	26.2	25.8	25.3	24.9	24.6	24.2	23.8	23.5	23.2	22.9	22.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
1100	31.5	30.8	30.3	29.7	29.2	28.7	28.2	27.7	27.3	26.9	26.5	26.1	25.7	25.4	25.0	24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
1200	34.2	33.5	32.8	32.2	31.6	31.1	30.6	30.1	29.6	29.2	28.7	28.3	27.9	27.5	27.2	26.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1300	36.8	36.1	35.4	34.8	34.1	33.5	33.0	32.4	31.9	31.4	31.0	30.5	30.1	29.7	29.3	28.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
1400	39.5	38.7	38.0	37.3	36.6	36.0	35.4	34.8	34.3	33.7	33.2	32.8	32.3	31.9	31.5	31.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1500	42.2	41.4	40.6	39.8	39.1	38.4	37.8	37.2	36.6	36.0	35.5	35.0	34.5	34.1	33.6	33.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
Term. 2/	1.999	1.944	1.891	1.842	1.794	1.750	1.707	1.666	1.627	1.590	1.555	1.521	1.489	1.458	1.428	1.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.026793	.026274	.025782	.025317	.024876	.024456	.024057	.023677	.023315	.022969	.022639	.022323	.022020	.021730	.021452	.021185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.960. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.16.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload, operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. - Southern

STOCK CARS

TABLE 40.—TERRITORY NO. 6 - SOUTHERN

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.3	14.4	12.4	10.8	9.6	8.7	7.9	7.2	6.7	6.2	5.8	5.5	5.1	4.9	4.6	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.0	2.9	-	-	-	-	10
20	18.4	15.4	13.2	11.6	10.3	9.3	8.5	7.8	7.2	6.7	6.3	5.9	5.5	5.2	5.0	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.5	3.4	3.3	3.2	-	-	-	-	20
30	19.6	16.4	14.1	12.4	11.0	9.9	9.1	8.3	7.7	7.2	6.7	6.3	5.9	5.6	5.3	5.1	4.9	4.6	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.5	-	-	-	-	30
40	20.8	17.4	15.0	13.1	11.7	10.6	9.6	8.9	8.2	7.6	7.2	6.7	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.7	-	-	-	-	40
50	22.0	18.4	15.8	13.9	12.4	11.2	10.2	9.4	8.7	8.1	7.6	7.1	6.8	6.4	6.1	5.8	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	-	-	-	-	50
60	23.2	19.4	16.7	14.7	13.1	11.8	10.8	9.9	9.2	8.6	8.0	7.6	7.2	6.8	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.3	-	-	-	-	60
70	24.3	20.4	17.6	15.4	13.8	12.5	11.4	10.5	9.7	9.1	8.5	8.0	7.6	7.2	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.5	-	-	-	-	70
80	25.5	21.4	18.4	16.2	14.5	13.1	12.0	11.0	10.2	9.5	8.9	8.4	8.0	7.6	7.2	6.9	6.6	6.3	6.1	5.8	5.6	5.4	5.3	5.1	4.9	4.8	-	-	-	-	80
90	26.7	22.4	19.3	17.0	15.2	13.7	12.5	11.6	10.7	10.0	9.4	8.8	8.4	7.9	7.6	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.4	5.2	5.1	-	-	-	-	90
100	27.9	23.4	20.1	17.7	15.8	14.3	13.1	12.1	11.2	10.5	9.8	9.3	8.8	8.3	7.9	7.6	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.5	5.3	-	-	-	-	100
120	30.2	25.4	21.9	19.3	17.2	15.6	14.3	13.2	12.2	11.4	10.7	10.1	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.1	6.8	6.6	6.4	6.2	6.0	5.9	-	-	-	-	120
140	32.6	27.4	23.6	20.8	18.6	16.9	15.4	14.2	13.2	12.4	11.6	11.0	10.4	9.9	9.4	9.0	8.6	8.3	8.0	7.7	7.4	7.2	7.0	6.8	6.6	6.4	-	-	-	-	140
160	35.0	29.3	25.3	22.3	20.0	18.1	16.6	15.3	14.2	13.3	12.5	11.8	11.2	10.6	10.2	9.7	9.3	8.9	8.6	8.3	8.0	7.8	7.5	7.3	7.1	6.9	-	-	-	-	160
180	37.3	31.3	27.1	23.9	21.4	19.4	17.8	16.4	15.2	14.3	13.4	12.7	12.0	11.4	10.9	10.4	10.0	9.6	9.3	8.9	8.6	8.4	8.1	7.9	7.6	7.4	-	-	-	-	180
200	39.7	33.3	28.8	25.4	22.8	20.6	18.9	17.5	16.3	15.2	14.3	13.5	12.8	12.2	11.6	11.1	10.7	10.3	9.9	9.5	9.2	8.9	8.7	8.4	8.2	8.0	-	-	-	-	200
220	42.0	35.3	30.5	26.9	24.1	21.9	20.1	18.6	17.3	16.2	15.2	14.4	13.6	13.0	12.4	11.8	11.4	10.9	10.5	10.2	9.8	9.5	9.2	9.0	8.7	8.5	-	-	-	-	220
240	44.4	37.3	32.3	28.5	25.5	23.2	21.2	19.6	18.3	17.1	16.1	15.2	14.4	13.7	13.1	12.6	12.0	11.6	11.2	10.8	10.4	10.1	9.8	9.5	9.3	9.0	-	-	-	-	240
260	46.7	39.3	34.0	30.0	26.9	24.4	22.4	20.7	19.3	18.0	17.0	16.1	15.2	14.5	13.9	13.3	12.7	12.3	11.8	11.4	11.0	10.7	10.4	10.1	9.8	9.5	-	-	-	-	260
280	49.1	41.3	35.7	31.5	28.3	25.7	23.6	21.8	20.3	19.0	17.9	16.9	16.0	15.3	14.6	14.0	13.4	12.9	12.4	12.0	11.6	11.3	10.9	10.6	10.3	10.1	-	-	-	-	280
300	51.5	43.3	37.5	33.1	29.7	26.9	24.7	22.9	21.3	19.9	18.8	17.8	16.9	16.0	15.3	14.7	14.1	13.6	13.1	12.6	12.2	11.9	11.5	11.2	10.9	10.6	-	-	-	-	300
320	53.8	45.3	39.2	34.6	31.1	28.2	25.9	23.9	22.3	20.9	19.7	18.6	17.7	16.8	16.1	15.4	14.8	14.2	13.7	13.3	12.8	12.4	12.1	11.7	11.4	11.1	-	-	-	-	320
340	56.2	47.3	40.9	36.1	32.4	29.5	27.0	25.0	23.3	21.8	20.6	19.4	18.5	17.6	16.8	16.1	15.5	14.9	14.4	13.9	13.4	13.0	12.6	12.3	12.0	11.7	-	-	-	-	340
360	58.5	49.3	42.6	37.7	33.8	30.7	28.2	26.1	24.3	22.8	21.5	20.3	19.3	18.4	17.6	16.8	16.2	15.6	15.0	14.5	14.0	13.6	13.2	12.8	12.5	12.2	-	-	-	-	360
380	60.9	51.3	44.4	39.2	35.2	32.0	29.4	27.2	25.3	23.7	22.3	21.1	20.1	19.1	18.3	17.5	16.8	16.2	15.6	15.1	14.6	14.2	13.8	13.4	13.0	12.7	-	-	-	-	380
400	63.3	53.2	46.1	40.7	36.6	33.2	30.5	28.2	26.3	24.7	23.2	22.0	20.9	19.9	19.0	18.2	17.5	16.9	16.3	15.7	15.2	14.8	14.4	14.0	13.6	13.2	-	-	-	-	400
420	65.6	55.2	47.8	42.3	38.0	34.5	31.7	29.3	27.3	25.6	24.1	22.8	21.7	20.7	19.8	19.0	18.2	17.5	16.9	16.4	15.8	15.4	14.9	14.5	14.1	13.8	-	-	-	-	420
440	68.0	57.2	49.6	43.8	39.3	35.8	32.8	30.4	28.3	26.6	25.0	23.7	22.5	21.5	20.5	19.7	18.9	18.2	17.6	17.0	16.4	15.9	15.5	15.1	14.7	14.3	-	-	-	-	440
460	70.3	59.2	51.3	45.3	40.7	37.0	34.0	31.5	29.3	27.5	25.9	24.5	23.3	22.2	21.3	20.4	19.6	18.9	18.2	17.6	17.0	16.5	16.1	15.6	15.2	14.8	-	-	-	-	460
480	72.7	61.2	53.0	46.9	42.1	38.3	35.2	32.6	30.3	28.5	26.8	25.4	24.1	23.0	22.0	21.1	20.3	19.5	18.8	18.2	17.6	17.1	16.6	16.2	15.7	15.4	-	-	-	-	480
500	75.0	63.2	54.8	48.4	43.5	39.5	36.3	33.6	31.4	29.4	27.7	26.2	24.9	23.8	22.7	21.8	21.0	20.2	19.5	18.8	18.2	17.7	17.2	16.7	16.3	15.9	-	-	-	-	500
600	86.8	73.2	63.4	56.1	50.4	45.8	42.1	39.0	36.4	34.1	32.2	30.5	29.0	27.6	26.4	25.4	24.4	23.5	22.7	21.9	21.3	20.6	20.0	19.5	19.0	18.5	-	-	-	-	600
700	98.6	83.1	72.1	63.8	57.3	52.1	47.9	44.4	41.4	38.9	36.7	34.7	33.0	31.5	30.1	28.9	27.8	26.8	25.9	25.0	24.3	23.5	22.9	22.3	21.7	21.2	-	-	-	-	700
800	110.4	93.1	80.7	71.4	64.2	58.4	53.7	49.8	46.5	43.6	41.1	39.0	37.0	35.3	33.8	32.5	31.2	30.1	29.1	28.1	27.3	26.5	25.7	25.0	24.4	23.8	-	-	-	-	800
900	122.2	103.0	89.4	79.1	71.1	64.7	59.5	55.2	51.5	48.3	45.6	43.2	41.1	39.2	37.5	36.0	34.6	33.4	32.3	31.2	30.3	29.4	28.6	27.8	27.1	26.4	-	-	-	-	900
1000	134.0	113.0	98.0	86.8	78.0	71.0	65.3	60.6	56.5	53.1	50.1	47.4	45.1	43.1	41.2	39.6	38.1	36.7	35.5	34.3	33.3	32.3	31.4	30.6	29.8	29.1	-	-	-	-	1000
1100	145.8	123.0	106.7	94.5	84.9	77.3	71.1	65.9	61.6	57.8	54.5	51.7	49.2	46.9	44.9	43.1	41.5	40.0	38.7	37.4	36.3	35.2	34.3	33.4	32.5	31.7	-	-	-	-	1100
1200	157.6	132.9	115.3	102.1	91.9	83.6	76.9	71.3	66.6	62.5	59.0	55.9	53.2	50.8	48.6	46.7	44.9	43.3	41.9	40.5	39.3	38.2	37.1	36.1	35.2	34.4	-	-	-	-	1200
1300	169.4	142.9	124.0	109.8	98.8	89.9	82.7	76.7	71.6	67.3	63.5	60.2	57.2	54.6	52.3	50.2	48.3	46.6	45.1	43.6	42.3	41.1	39.9	38.9	37.9	37.0	-	-	-	-	1300
1400	181.2	152.8	132.6	117.5	105.7	96.2	88.5	82.1	76.7	72.0	67.9	64.4	61.3	58.5	56.0	53.8	51.8	50.0	48.3	46.7	45.3	44.0	42.8	41.7	40.6	39.6	-	-	-	-	1400
1500	192.9	162.8	141.3	125.1	112.6	102.5	94.3	87.5	81.7	76.7	72.4	68.6	65.3	62.4	59.7	57.3	55.2	53.2	51.5	49.8	48.3	46.9	45.6	44.4	43.3	42.3	-	-	-	-	1500
Term. 2/	16.090	13.408	11.493	10.056	8.939	8.045	7.314	6.704	6.188	5.746	5.363	5.028	4.732	4.469	4.234	4.023	3.831	3.657	3.498	3.352	3.218	3.094	2.980	2.873	2.774	2.682	-	-	-	-	Term. 2/
L. H. 3/	.117900	.099600	.086529	.076725	.069100	.063000	.058009	.053850	.050331	.047314	.044700	.042413	.040394	.038600	.036995	.035550	.034243	.033055	.031970	.030975	.030060	.029215	.028433	.027707	.027031	.026400	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 20.5 tons and a ratio of empty car miles to loaded car miles of 0.897. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.16.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 41.—TERRITORY NO. 6 - SOUTHERN

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																										Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	15.6	13.0	11.1	9.8	8.7	7.8	7.1	6.5	6.0	5.6	5.2	4.9	4.6	4.4	4.2	4.0	3.8	3.6	3.4	3.3	3.2	3.1	2.9	2.8	2.7	2.7	-	-	-	-	10
20	17.1	14.3	12.3	10.8	9.6	8.6	7.9	7.2	6.7	6.2	5.8	5.5	5.2	4.9	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3	3.2	3.1	3.0	-	-	-	-	20
30	18.7	15.6	13.4	11.8	10.5	9.5	8.6	7.9	7.3	6.8	6.4	6.0	5.7	5.4	5.1	4.9	4.6	4.4	4.3	4.1	3.9	3.8	3.7	3.5	3.4	3.3	-	-	-	-	30
40	20.3	16.9	14.6	12.8	11.4	10.3	9.4	8.6	8.0	7.4	7.0	6.6	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.6	-	-	-	-	40
50	21.8	18.2	15.7	13.8	12.3	11.1	10.1	9.3	8.6	8.1	7.5	7.1	6.7	6.4	6.0	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	-	-	-	-	50
60	23.4	19.6	16.8	14.8	13.2	11.9	10.9	10.0	9.3	8.7	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	-	-	-	-	60
70	24.9	20.9	18.0	15.8	14.1	12.8	11.6	10.7	9.9	9.3	8.7	8.2	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.6	5.4	5.3	5.1	4.9	4.8	4.6	-	-	-	-	70
80	26.5	22.2	19.1	16.8	15.0	13.6	12.4	11.4	10.6	9.9	9.3	8.7	8.3	7.8	7.5	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.3	5.1	5.0	-	-	-	-	80
90	28.1	23.5	20.3	17.8	15.9	14.4	13.2	12.1	11.2	10.5	9.8	9.3	8.8	8.3	7.9	7.6	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.3	-	-	-	-	90
100	29.6	24.8	21.4	18.8	16.8	15.2	13.9	12.8	11.9	11.1	10.4	9.8	9.3	8.8	8.4	8.0	7.7	7.4	7.1	6.8	6.6	6.4	6.1	6.0	5.8	5.6	-	-	-	-	100
120	32.8	27.5	23.7	20.8	18.6	16.9	15.4	14.2	13.2	12.3	11.6	10.9	10.3	9.8	9.3	8.9	8.5	8.2	7.9	7.6	7.3	7.1	6.9	6.6	6.5	6.3	-	-	-	-	120
140	35.9	30.1	26.0	22.9	20.4	18.5	16.9	15.6	14.5	13.6	12.7	12.0	11.4	10.8	10.3	9.8	9.4	9.0	8.7	8.4	8.1	7.8	7.6	7.3	7.1	6.9	-	-	-	-	140
160	39.0	32.7	28.2	24.9	22.3	20.2	18.4	17.0	15.8	14.8	13.9	13.1	12.4	11.8	11.2	10.7	10.3	9.9	9.5	9.2	8.8	8.6	8.3	8.0	7.8	7.6	-	-	-	-	160
180	42.2	35.4	30.5	26.9	24.1	21.8	20.0	18.4	17.1	16.0	15.0	14.2	13.4	12.8	12.2	11.6	11.1	10.7	10.3	9.9	9.6	9.3	9.0	8.7	8.5	8.2	-	-	-	-	180
200	45.3	38.0	32.8	28.9	25.9	23.5	21.5	19.8	18.4	17.2	16.2	15.3	14.5	13.7	13.1	12.5	12.0	11.5	11.1	10.7	10.4	10.0	9.7	9.4	9.1	8.9	-	-	-	-	200
220	48.4	40.6	35.1	30.9	27.7	25.1	23.0	21.2	19.7	18.4	17.3	16.4	15.5	14.7	14.1	13.4	12.9	12.4	11.9	11.5	11.1	10.8	10.4	10.1	9.8	9.6	-	-	-	-	220
240	51.5	43.3	37.4	32.9	29.5	26.7	24.5	22.6	21.0	19.7	18.5	17.4	16.5	15.7	15.0	14.3	13.8	13.2	12.7	12.3	11.9	11.5	11.1	10.8	10.5	10.2	-	-	-	-	240
260	54.7	45.9	39.7	35.0	31.3	28.4	26.0	24.0	22.3	20.9	19.6	18.5	17.6	16.7	15.9	15.2	14.6	14.1	13.5	13.1	12.6	12.2	11.8	11.5	11.2	10.9	-	-	-	-	260
280	57.8	48.5	41.9	37.0	33.1	30.0	27.5	25.4	23.6	22.1	20.8	19.6	18.6	17.7	16.9	16.2	15.5	14.9	14.3	13.8	13.4	12.9	12.6	12.2	11.8	11.5	-	-	-	-	280
300	60.9	51.2	44.2	39.0	34.9	31.7	29.0	26.8	24.9	23.3	21.9	20.7	19.6	18.7	17.8	17.1	16.4	15.7	15.1	14.6	14.1	13.7	13.3	12.9	12.5	12.2	-	-	-	-	300
320	64.1	53.8	46.5	41.0	36.7	33.3	30.5	28.2	26.2	24.5	23.1	21.8	20.7	19.7	18.8	18.0	17.2	16.6	16.0	15.4	14.9	14.4	14.0	13.6	13.2	12.8	-	-	-	-	320
340	67.2	56.4	48.8	43.0	38.6	35.0	32.0	29.6	27.5	25.8	24.2	22.9	21.7	20.7	19.7	18.9	18.1	17.4	16.8	16.2	15.6	15.1	14.7	14.3	13.9	13.5	-	-	-	-	340
360	70.3	59.1	51.1	45.0	40.4	36.6	33.6	31.0	28.8	27.0	25.4	24.0	22.7	21.6	20.7	19.8	19.0	18.2	17.6	17.0	16.4	15.9	15.4	15.0	14.5	14.2	-	-	-	-	360
380	73.4	61.7	53.3	47.1	42.2	38.3	35.1	32.4	30.1	28.2	26.5	25.1	23.8	22.6	21.6	20.7	19.8	19.1	18.4	17.7	17.2	16.6	16.1	15.6	15.2	14.8	-	-	-	-	380
400	76.[illegible]	64.4	55.6	49.1	44.0	39.9	36.6	33.8	31.4	29.4	27.7	26.2	24.8	23.6	22.5	21.6	20.7	19.9	19.2	18.5	17.9	17.3	16.8	16.3	15.9	15.5	-	-	-	-	400
420	79.[illegible]	67.0	57.9	51.1	45.8	41.6	38.1	35.2	32.7	30.7	28.8	27.2	25.8	24.6	23.5	22.5	21.6	20.7	20.0	19.3	18.7	18.1	17.5	17.0	16.6	16.1	-	-	-	-	420
440	82.[illegible]	69.8	60.2	53.1	47.6	43.2	39.6	36.6	34.1	31.9	30.0	28.3	26.9	25.6	24.4	23.4	22.4	21.6	20.8	20.1	19.4	18.8	18.2	17.7	17.2	16.8	-	-	-	-	440
460	86.0	72.3	62.5	55.1	49.4	44.8	41.1	38.0	35.4	33.1	31.1	29.4	27.9	26.6	25.4	24.3	23.3	22.4	21.6	20.9	20.2	19.5	19.0	18.4	17.9	17.4	-	-	-	-	460
480	89.1	74.9	64.7	57.1	51.2	46.5	42.6	39.4	36.7	34.3	32.3	30.5	28.9	27.6	26.3	25.2	24.2	23.3	22.4	21.6	20.9	20.3	19.7	19.1	18.6	18.1	-	-	-	-	480
500	92.2	77.5	67.0	59.2	53.0	48.1	44.1	40.8	38.0	35.5	33.4	31.6	30.0	28.5	27.3	26.1	25.0	24.1	23.2	22.4	21.7	21.0	20.4	19.8	19.3	18.7	-	-	-	-	500
600	107.9	90.7	78.4	69.2	62.1	56.4	51.7	47.8	44.5	41.6	39.2	37.0	35.2	33.5	32.0	30.6	29.4	28.3	27.3	26.3	25.5	24.7	23.9	23.3	22.6	22.0	-	-	-	-	600
700	123.5	103.9	89.8	79.3	71.1	64.6	59.2	54.8	51.0	47.8	45.0	42.5	40.3	38.4	36.7	35.1	33.7	32.5	31.3	30.2	29.2	28.3	27.5	26.7	26.0	25.3	-	-	-	-	700
800	139.2	117.0	101.2	89.4	80.2	72.8	66.8	61.8	57.5	53.9	50.7	47.9	45.5	43.3	41.4	39.6	38.1	36.6	35.3	34.1	33.0	32.0	31.0	30.2	29.4	28.6	-	-	-	-	800
900	154.8	130.2	112.7	99.5	89.2	81.0	74.3	68.8	64.0	60.0	56.5	53.4	50.7	48.3	46.1	44.2	42.4	40.8	39.4	38.0	36.8	35.7	34.6	33.6	32.7	31.9	-	-	-	-	900
1000	170.4	143.4	124.1	109.6	98.3	89.3	81.9	75.7	70.5	66.1	62.2	58.8	55.8	53.2	50.8	48.7	46.8	45.0	43.4	41.9	40.6	39.3	38.2	37.1	36.1	35.2	-	-	-	-	1000
1100	186.1	156.6	135.5	119.6	107.3	97.5	89.4	82.7	77.1	72.2	68.0	64.3	61.0	58.1	55.5	53.2	51.1	49.2	47.4	45.8	44.3	43.0	41.7	40.5	39.5	38.4	-	-	-	-	1100
1200	201.7	169.7	146.9	129.7	116.4	105.7	97.0	89.7	83.6	78.3	73.7	69.7	66.2	63.1	60.2	57.7	55.4	53.4	51.5	49.7	48.1	46.6	45.3	44.0	42.8	41.7	-	-	-	-	1200
1300	217.4	182.9	158.3	139.8	125.4	113.9	104.6	96.7	90.1	84.4	79.5	75.2	71.4	68.0	65.0	62.2	59.8	57.5	55.5	53.6	51.9	50.3	48.8	47.5	46.2	45.0	-	-	-	-	1300
1400	233.0	196.1	169.7	149.9	134.5	122.2	112.1	103.7	96.6	90.5	85.2	80.6	76.5	72.9	69.7	66.8	64.1	61.7	59.5	57.5	55.7	54.0	52.4	50.9	49.6	48.3	-	-	-	-	1400
1500	248.7	209.3	181.1	160.0	143.6	130.4	119.7	110.7	103.1	96.6	91.0	86.1	81.7	77.9	74.4	71.3	68.5	65.9	63.6	61.4	59.5	57.6	56.0	54.4	52.9	51.6	-	-	-	-	1500
Term. 2/	13.996	11.663	9.997	8.748	7.776	6.998	6.362	5.832	5.383	4.999	4.665	4.374	4.116	3.888	3.683	3.499	3.332	3.181	3.043	2.916	2.799	2.692	2.592	2.499	2.413	2.333	-	-	-	-	Term. 2/
L. H. 3/	.156450	.131725	.114064	.100819	.090517	.082275	.075532	.069913	.065158	.061082	.057550	.054459	.051732	.049308	.047139	.045188	.043421	.041816	.040350	.039006	.037770	.036629	.035572	.034591	.033678	.032825	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.846. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.30.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.10.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 42.—TERRITORY NO. 6 - SOUTHERN

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	71.5	55.7	47.8	43.1	39.9	37.7	36.0	34.7	33.6	32.8	32.0	31.4	30.9	30.5	30.1	29.7	29.4	29.1	28.9	28.7	28.5	28.3	28.1	27.9	27.8	27.7	27.5	27.4	27.3	10
20	76.0	58.8	50.2	45.0	41.6	39.1	37.3	35.8	34.7	33.7	33.0	32.3	31.7	31.2	31.0	30.4	30.1	29.8	29.5	29.3	29.0	28.8	28.6	28.5	28.3	28.2	28.0	27.9	27.8	20
30	80.6	61.9	52.6	47.0	43.2	40.5	38.5	37.0	35.7	34.7	33.9	33.1	32.5	32.0	31.5	31.1	30.7	30.4	30.1	29.9	29.6	29.4	29.2	29.0	28.8	28.7	28.5	28.4	28.3	30
40	85.2	65.0	54.9	48.9	44.9	42.0	39.8	38.1	36.8	35.7	34.8	34.0	33.3	32.8	32.2	31.8	31.4	31.1	30.7	30.4	30.2	29.9	29.7	29.5	29.3	29.2	29.0	28.9	28.7	40
50	89.8	68.1	57.3	50.8	46.5	43.4	41.1	39.3	37.8	36.7	35.7	34.8	34.1	33.5	33.0	32.5	32.1	31.7	31.4	31.0	30.8	30.5	30.3	30.1	29.9	29.7	29.5	29.3	29.2	50
60	94.3	71.2	59.7	52.8	48.1	44.8	42.4	40.4	38.9	37.6	36.6	35.7	34.9	34.3	33.7	33.2	32.7	32.3	32.0	31.6	31.3	31.1	30.8	30.6	30.4	30.2	30.0	29.8	29.7	60
70	98.9	74.3	62.1	54.7	49.8	46.3	43.6	41.6	40.0	38.6	37.5	36.6	35.7	35.0	34.4	33.9	33.4	33.0	32.6	32.2	31.9	31.6	31.4	31.1	30.9	30.7	30.5	30.3	30.1	70
80	103.5	77.5	64.4	56.6	51.4	47.7	44.9	42.7	41.0	39.6	38.4	37.4	36.5	35.8	35.1	34.6	34.1	33.6	33.2	32.8	32.5	32.2	31.9	31.6	31.4	31.2	31.0	30.8	30.6	80
90	108.1	80.6	66.8	58.6	53.1	49.1	46.2	43.9	42.1	40.6	39.3	38.3	37.3	36.6	35.9	35.3	34.7	34.2	33.8	33.4	33.1	32.7	32.4	32.2	31.9	31.7	31.5	31.3	31.1	90
100	112.6	83.7	69.2	60.5	54.7	50.6	47.5	45.0	43.1	41.5	40.2	39.1	38.1	37.3	36.6	36.0	35.4	34.9	34.4	34.0	33.6	33.3	33.0	32.7	32.4	32.2	31.9	31.7	31.5	100
120	121.8	89.9	73.9	64.4	58.0	53.4	50.0	47.4	45.2	43.5	42.0	40.8	39.8	38.8	38.0	37.3	36.7	36.2	35.7	35.2	34.8	34.4	34.1	33.7	33.4	33.2	32.9	32.7	32.5	120
140	130.9	96.1	78.7	68.2	61.3	56.3	52.6	49.7	47.3	45.4	43.9	42.5	41.4	40.4	39.5	38.7	38.0	37.4	36.9	36.4	35.9	35.5	35.1	34.8	34.5	34.2	33.9	33.6	33.4	140
160	140.1	102.3	83.4	72.1	64.6	59.2	55.1	52.0	49.4	47.4	45.7	44.2	43.0	41.9	40.9	40.1	39.4	38.7	38.1	37.6	37.1	36.6	36.2	35.8	35.5	35.2	34.9	34.6	34.3	160
180	149.3	108.5	88.2	76.0	67.8	62.0	57.7	54.3	51.6	49.3	47.5	45.9	44.6	43.4	42.4	41.5	40.7	40.0	39.3	38.8	38.2	37.7	37.3	36.9	36.5	36.2	35.9	35.6	35.3	180
200	158.4	114.6	92.9	79.8	71.1	64.9	60.2	56.6	53.7	51.3	49.3	47.6	46.2	44.9	43.8	42.9	42.0	41.3	40.6	39.9	39.4	38.9	38.4	38.0	37.5	37.2	36.8	36.5	36.2	200
220	167.6	121.0	97.7	83.7	74.4	67.7	62.8	58.9	55.8	53.2	51.1	49.3	47.8	46.5	45.3	44.3	43.3	42.5	41.8	41.1	40.5	40.0	39.5	39.0	38.6	38.2	37.8	37.5	37.1	220
240	176.7	127.2	102.4	87.6	77.7	70.6	65.3	61.2	57.9	55.2	52.9	51.0	49.4	48.0	46.7	45.6	44.7	43.8	43.0	42.3	41.7	41.1	40.6	40.1	39.6	39.2	38.8	38.4	38.1	240
260	185.9	133.4	107.2	91.5	81.0	73.5	67.9	63.5	60.0	57.1	54.7	52.7	51.0	49.5	48.2	47.0	46.0	45.1	44.3	43.6	42.8	42.2	41.6	41.1	40.6	40.2	39.8	39.4	39.0	260
280	195.0	139.6	111.9	95.3	84.2	76.3	70.4	65.8	62.1	59.1	56.6	54.4	52.6	51.0	49.6	48.4	47.3	46.4	45.5	44.7	44.0	43.3	42.7	42.2	41.7	41.2	40.7	40.3	39.9	280
300	204.2	145.9	116.7	99.2	87.5	79.2	73.0	68.1	64.2	61.0	58.4	56.1	54.2	52.5	51.1	49.8	48.7	47.6	46.7	45.9	45.1	44.4	43.8	43.2	42.7	42.2	41.7	41.3	40.9	300
320	213.3	152.1	121.4	103.1	90.8	82.1	75.5	70.4	66.3	63.0	60.2	57.8	55.8	54.1	52.5	51.2	50.0	48.9	47.9	47.1	46.3	45.5	44.9	44.3	43.7	43.2	42.7	42.2	41.8	320
340	222.5	158.3	126.2	106.9	94.1	84.9	78.1	72.7	68.4	64.9	62.0	59.5	57.4	55.6	54.0	52.6	51.3	50.2	49.2	48.3	47.4	46.7	46.0	45.3	44.7	44.2	43.7	43.2	42.8	340
360	231.6	164.5	130.9	110.8	97.4	87.8	80.6	75.0	70.5	66.9	63.8	61.2	59.0	57.1	55.4	54.0	52.8	51.5	50.4	49.4	48.6	47.8	47.0	46.4	45.8	45.2	44.6	44.2	43.7	360
380	240.8	170.7	135.7	114.7	100.7	90.7	83.2	77.3	72.6	68.8	65.6	62.9	60.6	58.6	56.9	55.3	54.0	52.7	51.6	50.6	49.7	48.9	48.1	47.4	46.8	46.2	45.6	45.1	44.6	380
400	249.9	176.9	140.4	118.5	103.9	93.5	85.7	79.6	74.8	70.8	67.5	64.7	62.2	60.2	58.3	56.7	55.3	54.0	52.9	51.8	50.9	50.0	49.2	48.5	47.8	47.2	46.6	46.1	45.6	400
420	259.1	183.2	145.2	122.4	107.2	96.4	88.3	81.9	76.9	72.7	69.3	66.4	63.8	61.7	59.8	58.1	56.6	55.3	54.1	53.0	52.0	51.1	50.3	49.5	48.8	48.2	47.6	47.0	46.5	420
440	268.2	189.4	149.9	126.3	110.5	99.3	90.8	84.2	79.0	74.7	71.1	68.1	65.5	63.2	61.2	59.5	57.9	56.6	55.3	54.2	53.2	52.2	51.4	50.6	49.9	49.2	48.6	48.0	47.4	440
460	277.4	195.6	154.7	130.2	113.8	102.1	93.4	86.5	81.1	76.6	72.9	69.8	67.1	64.7	62.7	60.9	59.3	57.8	56.5	55.4	54.3	53.3	52.5	51.6	50.9	50.2	49.5	48.9	48.4	460
480	286.5	201.8	159.4	134.0	117.1	105.0	95.9	88.8	83.2	78.6	74.7	71.5	68.7	66.2	64.1	62.3	60.6	59.1	57.8	56.6	55.5	54.5	53.5	52.7	51.9	51.2	50.5	49.9	49.3	480
500	295.7	208.0	164.2	137.9	120.4	107.8	98.5	91.1	85.3	80.5	76.5	73.2	70.3	67.8	65.6	63.6	61.9	60.4	59.0	57.8	56.6	55.6	54.6	53.7	52.9	52.2	51.5	50.8	50.2	500
600	341.5	239.1	188.0	157.3	136.8	122.2	111.8	102.7	95.9	90.3	85.6	81.7	78.3	75.4	72.8	70.6	68.6	66.8	65.2	63.7	62.4	61.1	60.0	59.0	58.1	57.2	56.4	55.6	54.9	600
700	387.2	270.2	211.7	176.6	153.2	136.5	124.0	114.2	106.4	100.0	94.7	90.2	86.3	83.0	80.1	77.5	75.2	73.1	71.3	69.6	68.1	66.7	65.4	64.3	63.2	62.2	61.3	60.4	59.6	700
800	433.0	301.3	235.5	196.0	169.6	150.8	136.7	125.7	116.9	109.8	103.8	98.7	94.4	90.6	87.3	84.4	81.8	79.5	77.4	75.6	73.9	72.3	70.9	69.5	68.3	67.2	66.2	65.2	64.3	800
900	478.7	332.4	259.2	215.3	186.0	165.1	149.4	137.2	127.5	119.5	112.9	107.2	102.4	98.2	94.6	91.3	88.5	85.9	83.6	81.5	79.6	77.9	76.3	74.8	73.5	72.2	71.0	70.0	69.0	900
1000	524.5	363.5	283.0	234.7	202.4	179.4	162.2	148.8	138.0	129.3	121.9	115.7	110.4	105.8	101.8	98.3	95.1	92.3	89.7	87.4	85.3	83.4	81.7	80.1	78.6	77.2	75.9	74.7	73.6	1000
1100	570.3	394.6	306.7	254.0	218.9	193.8	174.9	160.3	148.6	139.0	131.0	124.3	118.5	113.4	109.1	105.2	101.7	98.7	95.9	93.4	91.1	89.0	87.1	85.3	83.7	82.2	80.8	79.5	78.3	1100
1200	616.0	425.7	330.5	273.4	235.3	208.1	187.7	171.8	159.1	148.8	140.1	132.8	126.5	121.1	116.3	112.1	108.4	105.0	102.0	99.3	96.8	94.6	92.5	90.6	88.8	87.2	85.7	84.3	83.0	1200
1300	661.8	456.8	354.2	292.7	251.7	222.4	200.4	183.3	169.7	158.5	149.2	141.3	134.5	128.7	123.5	119.0	115.0	111.4	108.2	105.2	102.6	100.1	97.9	95.9	94.0	92.2	90.6	89.1	87.7	1300
1400	707.6	487.8	378.0	312.1	268.1	236.7	213.2	194.9	180.2	168.2	158.3	149.8	142.6	136.3	130.8	125.9	121.6	117.8	114.3	111.2	108.3	105.7	103.3	101.1	99.1	97.2	95.5	93.9	92.3	1400
1500	753.3	518.9	401.7	331.4	284.5	251.0	225.9	206.4	190.8	178.0	167.3	158.3	150.6	143.9	138.0	132.9	128.3	124.2	120.5	117.1	114.1	111.3	108.7	106.4	104.2	102.2	100.4	98.6	97.0	1500
Term. 2/	66.880	52.585	45.435	41.145	38.285	36.245	34.715	33.520	32.570	31.790	31.140	30.590	30.115	29.710	29.350	29.035	28.755	28.505	28.280	28.075	27.890	27.720	27.565	27.420	27.290	27.165	27.055	26.950	26.850	Term. 2/
L. H. 3/	.45763	.31090	.23753	.19391	.16416	.14320	.12748	.11525	.10547	.09747	.09080	.08515	.08032	.07612	.07246	.06922	.06634	.06377	.06145	.05935	.05745	.05571	.05411	.05265	.05129	.05004	.04887	.04779	.04678	L. H. 3/

1/ Based on a tare weight of 22.4 tons and a ratio of empty car miles to loaded car miles of 0.294. The Less-carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.21.

For Cost Level III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.30.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 7 - Southwestern, incl. Southern Missouri

BOX CARS

TABLE 43.—TERRITORY NO. 7 - SOUTHWESTERN, including Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	19.0	15.8	13.6	11.9	10.6	9.5	8.7	8.0	7.3	6.8	6.4	6.0	5.6	5.3	5.1	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.3	3.2	3.1	3.0	2.9	2.9	10
20	19.9	16.6	14.3	12.5	11.1	10.0	9.1	8.4	7.8	7.2	6.7	6.3	6.0	5.6	5.4	5.1	4.9	4.6	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.3	3.2	3.2	3.1	20
30	20.8	17.4	14.9	13.1	11.7	10.5	9.6	8.8	8.2	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	3.3	30
40	21.8	18.2	15.6	13.7	12.2	11.0	10.1	9.3	8.6	8.0	7.5	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	3.5	40
50	22.7	19.0	16.3	14.3	12.8	11.5	10.5	9.7	9.0	8.4	7.8	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.2	5.0	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	3.7	50
60	23.6	19.8	17.0	14.9	13.3	12.0	11.0	10.1	9.4	8.7	8.2	7.7	7.3	6.9	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9	60
70	24.6	20.6	17.7	15.6	13.9	12.6	11.5	10.6	9.8	9.1	8.6	8.1	7.6	7.2	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.6	4.4	4.3	4.2	4.1	70
80	25.5	21.3	18.4	16.2	14.4	13.1	11.9	11.0	10.2	9.5	8.9	8.4	7.9	7.5	7.2	6.8	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.4	4.3	80
90	26.4	22.1	19.1	16.8	15.0	13.6	12.4	11.4	10.6	9.9	9.3	8.7	8.3	7.9	7.5	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.9	4.7	4.6	4.5	90
100	27.3	22.9	19.8	17.4	15.5	14.1	12.9	11.9	11.0	10.3	9.6	9.1	8.6	8.2	7.8	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	4.7	100
120	29.2	24.5	21.1	18.6	16.6	15.1	13.8	12.7	11.8	11.0	10.4	9.8	9.3	8.8	8.4	8.0	7.7	7.4	7.1	6.8	6.6	6.4	6.2	6.0	5.8	5.7	5.5	5.4	5.2	5.1	120
140	31.1	26.1	22.5	19.8	17.7	16.1	14.7	13.6	12.6	11.8	11.1	10.5	9.9	9.4	9.0	8.6	8.2	7.9	7.6	7.4	7.1	6.9	6.7	6.5	6.3	6.1	5.9	5.8	5.6	5.5	140
160	32.9	27.6	23.9	21.0	18.9	17.1	15.7	14.5	13.4	12.6	11.8	11.2	10.6	10.1	9.6	9.2	8.8	8.5	8.2	7.9	7.6	7.4	7.1	6.9	6.7	6.5	6.4	6.2	6.1	5.9	160
180	34.8	29.2	25.2	22.3	20.0	18.1	16.6	15.3	14.3	13.3	12.5	11.8	11.2	10.7	10.2	9.8	9.4	9.0	8.7	8.4	8.1	7.8	7.6	7.4	7.2	7.0	6.8	6.6	6.5	6.3	180
200	36.6	30.8	26.6	23.5	21.1	19.1	17.5	16.2	15.1	14.1	13.3	12.5	11.9	11.3	10.8	10.4	9.9	9.6	9.2	8.9	8.6	8.3	8.1	7.8	7.6	7.4	7.2	7.1	6.9	6.7	200
220	38.5	32.4	28.0	24.7	22.2	20.1	18.4	17.1	15.9	14.9	14.0	13.2	12.6	12.0	11.4	10.9	10.5	10.1	9.7	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.3	7.2	220
240	40.3	33.9	29.4	25.9	23.3	21.1	19.4	17.9	16.7	15.6	14.7	13.9	13.2	12.6	12.0	11.5	11.1	10.6	10.3	9.9	9.6	9.3	9.0	8.8	8.5	8.3	8.1	7.9	7.7	7.6	240
260	42.2	35.5	30.7	27.2	24.4	22.1	20.3	18.8	17.5	16.4	15.4	14.6	13.9	13.2	12.6	12.1	11.6	11.2	10.8	10.4	10.1	9.8	9.5	9.2	9.0	8.8	8.5	8.3	8.1	8.0	260
280	44.1	37.1	32.1	28.4	25.5	23.1	21.2	19.7	18.3	17.2	16.2	15.3	14.5	13.8	13.2	12.7	12.2	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.4	9.2	9.0	8.8	8.6	8.4	280
300	45.9	38.7	33.5	29.6	26.6	24.2	22.2	20.5	19.1	17.9	16.9	16.0	15.2	14.5	13.8	13.3	12.8	12.3	11.8	11.5	11.1	10.8	10.4	10.2	9.9	9.6	9.4	9.2	9.0	8.8	300
320	47.8	40.2	34.9	30.8	27.7	25.2	23.1	21.4	19.9	18.7	17.6	16.7	15.8	15.1	14.4	13.9	13.3	12.8	12.4	12.0	11.6	11.2	10.9	10.6	10.3	10.1	9.8	9.6	9.4	9.2	320
340	49.6	41.8	36.2	32.0	28.8	26.2	24.0	22.3	20.8	19.5	18.3	17.4	16.5	15.7	15.1	14.4	13.9	13.4	12.9	12.5	12.1	11.7	11.4	11.1	10.8	10.5	10.3	10.0	9.8	9.6	340
360	51.5	43.4	37.6	33.3	29.9	27.2	25.0	23.1	21.6	20.2	19.1	18.1	17.2	16.4	15.7	15.0	14.4	13.9	13.4	13.0	12.6	12.2	11.9	11.6	11.2	11.0	10.7	10.5	10.2	10.0	360
380	53.4	45.0	39.0	34.5	31.0	28.2	25.9	24.0	22.4	21.0	19.8	18.8	17.8	17.0	16.3	15.6	15.0	14.5	14.0	13.5	13.1	12.7	12.3	12.0	11.7	11.4	11.1	10.9	10.6	10.4	380
400	55.2	46.5	40.3	35.7	32.1	29.2	26.8	24.9	23.2	21.8	20.5	19.4	18.5	17.6	16.9	16.2	15.6	15.0	14.5	14.0	13.6	13.2	12.8	12.5	12.2	11.9	11.6	11.3	11.1	10.8	400
420	57.1	48.1	41.7	36.9	33.2	30.2	27.8	25.7	24.0	22.5	21.2	20.1	19.1	18.3	17.5	16.8	16.1	15.6	15.0	14.5	14.1	13.7	13.3	12.9	12.6	12.3	12.0	11.7	11.5	11.2	420
440	58.9	50.0	43.1	38.1	34.3	31.2	28.7	26.6	24.8	23.3	22.0	20.8	19.8	18.9	18.1	17.4	16.7	16.1	15.5	15.0	14.6	14.2	13.8	13.4	13.1	12.7	12.4	12.2	11.9	11.7	440
460	60.8	51.3	44.5	39.4	35.4	32.2	29.6	27.5	25.6	24.1	22.7	21.5	20.5	19.5	18.7	17.9	17.3	16.6	16.1	15.6	15.1	14.6	14.2	13.9	13.5	13.2	12.9	12.6	12.3	12.1	460
480	62.6	52.8	45.8	40.6	36.5	33.2	30.6	28.3	26.4	24.8	23.4	22.2	21.1	20.2	19.3	18.5	17.8	17.2	16.6	16.1	15.6	15.1	14.7	14.3	14.0	13.6	13.3	13.0	12.7	12.5	480
500	64.5	54.4	47.2	41.8	37.6	34.2	31.5	29.2	27.3	25.6	24.2	22.9	21.8	20.8	19.9	19.1	18.4	17.7	17.1	16.6	16.1	15.6	15.2	14.8	14.4	14.1	13.7	13.4	13.1	12.9	500
600	73.8	62.3	54.1	47.9	43.1	39.3	36.1	33.5	31.3	29.4	27.8	26.3	25.1	23.9	22.9	22.0	21.2	20.5	19.8	19.2	18.6	18.0	17.6	17.1	16.7	16.3	15.9	15.6	15.2	14.9	600
700	83.1	70.2	60.9	54.0	48.6	44.3	40.8	37.9	35.4	33.3	31.4	29.8	28.4	27.1	26.0	24.9	24.0	23.2	22.4	21.7	21.1	20.5	19.9	19.4	18.9	18.5	18.1	17.7	17.3	17.0	700
800	92.4	78.0	67.8	60.1	54.2	49.4	45.5	42.2	39.4	37.1	35.0	33.2	31.7	30.3	29.0	27.9	26.8	25.9	25.1	24.3	23.6	22.9	22.3	21.7	21.2	20.7	20.2	19.8	19.4	19.0	800
900	101.7	85.9	74.7	66.2	59.7	54.4	50.1	46.5	43.5	40.9	38.7	36.7	35.0	33.4	32.0	30.8	29.7	28.6	27.7	26.8	26.1	25.3	24.7	24.0	23.5	32.9	22.4	21.9	21.5	21.1	900
1000	111.0	93.8	81.5	72.3	65.2	59.5	54.8	50.9	47.6	44.7	42.3	40.1	38.2	36.6	35.1	33.7	32.5	31.4	30.3	29.4	28.6	27.8	27.0	26.3	25.7	25.1	24.6	24.0	23.6	23.1	1000
1100	120.3	101.7	88.4	78.4	70.7	64.5	59.4	55.2	51.6	48.6	45.9	43.6	41.5	39.7	38.1	36.6	35.3	34.1	33.0	32.0	31.0	30.2	29.4	28.7	28.0	27.3	26.7	26.2	25.6	25.1	1100
1200	129.6	109.5	95.3	84.5	76.2	69.5	64.1	59.5	55.7	52.4	49.5	47.0	44.8	42.9	41.1	39.5	38.1	36.8	35.6	34.5	33.5	32.6	31.8	31.0	30.2	29.5	28.9	28.3	27.7	27.2	1200
1300	138.8	117.4	102.1	90.7	81.7	74.6	68.7	63.9	59.8	56.2	53.2	50.5	48.1	46.0	44.2	42.5	40.9	39.5	38.3	37.1	36.0	35.0	34.1	33.3	32.5	31.8	31.1	30.4	29.8	29.2	1300
1400	148.1	125.3	109.0	96.8	87.2	79.6	73.4	68.2	63.8	60.1	56.8	53.9	51.4	49.2	47.2	45.4	43.8	42.3	40.9	39.7	38.5	37.5	36.5	35.6	34.8	34.0	33.2	32.5	31.9	31.3	1400
1500	157.4	133.2	115.9	102.9	92.8	84.7	78.1	72.6	67.9	63.9	60.4	57.4	54.7	52.3	50.2	48.3	46.6	45.0	43.6	42.2	41.0	39.9	38.9	37.9	37.0	36.2	35.4	34.7	34.0	33.3	1500
Term. 2/	18.046	15.038	12.890	11.279	10.026	9.023	8.203	7.519	6.941	6.445	6.015	5.639	5.308	5.013	4.749	4.512	4.297	4.101	3.923	3.760	3.609	3.470	3.342	3.223	3.111	3.008	2.911	2.820	2.734	2.654	Term. 2/
L. H. 3/	.092920	.078758	.068643	.061056	.055156	.050435	.046573	.043354	.040631	.038296	.036273	.034503	.032941	.031553	.030311	.029193	.028181	.027261	.026422	.025652	.024944	.024290	.023685	.023123	.022600	.022112	.021655	.021227	.020824	.020446	L. H. 3/

1/ Based on a tare weight of 22.9 tons and a ratio of empty car miles to loaded car miles of 0.378. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.20.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.29.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 43 (Concluded).—TERRITORY NO. 7 - SOUTHWESTERN, including Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.8	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	10
20	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	20
30	3.2	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	30
40	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	40
50	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	50
60	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	60
70	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	70
80	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.7	80
90	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	3.0	2.9	2.9	2.9	90
100	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	3.0	3.0	2.9	2.9	100
120	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	120
140	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.5	140
160	5.8	5.7	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.7	160
180	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	180
200	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	200
220	7.0	6.8	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	220
240	7.4	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	5.0	240
260	7.8	7.6	7.5	7.3	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.7	5.6	5.6	5.5	5.5	5.4	5.4	5.3	5.3	260
280	8.2	8.0	7.9	7.7	7.6	7.5	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.7	5.6	5.5	5.5	280
300	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	6.0	5.9	5.8	5.8	300
320	9.0	8.8	8.7	8.5	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.4	6.4	6.3	6.3	6.2	6.1	6.1	320
340	9.4	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.6	6.5	6.4	6.4	340
360	9.8	9.6	9.4	9.3	9.1	8.9	8.8	8.7	8.5	8.4	8.3	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.8	6.8	6.7	6.7	360
380	10.2	10.0	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.1	7.0	380
400	10.6	10.4	10.2	10.0	9.9	9.7	9.5	9.4	9.2	9.1	9.0	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	7.4	7.3	7.2	400
420	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.7	9.6	9.4	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	420
440	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.8	440
460	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.0	8.9	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.3	8.2	8.1	460
480	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.6	8.5	8.4	480
500	12.6	12.4	12.2	11.9	11.7	11.5	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	8.8	8.7	500
600	14.6	14.4	14.1	13.9	13.6	13.4	13.2	13.0	12.8	12.6	12.4	12.3	12.1	12.0	11.8	11.7	11.5	11.4	11.3	11.2	11.0	10.9	10.8	10.7	10.6	10.5	10.4	10.3	10.2	10.2	600
700	16.6	16.3	16.0	15.8	15.5	15.3	15.0	14.8	14.6	14.4	14.2	14.0	13.8	13.6	13.5	13.3	13.2	13.0	12.9	12.7	12.6	12.5	12.4	12.3	12.1	12.0	11.9	11.8	11.7	11.6	700
800	18.6	18.3	18.0	17.7	17.4	17.1	16.9	16.6	16.4	16.1	15.9	15.7	15.5	15.3	15.1	15.0	14.8	14.6	14.5	14.3	14.2	14.0	13.9	13.8	13.6	13.5	13.4	13.3	13.2	13.1	800
900	20.7	20.3	19.9	19.6	19.3	19.0	18.7	18.4	18.1	17.9	17.7	17.4	17.2	17.0	16.8	16.6	16.4	16.2	16.1	15.9	15.7	15.6	15.4	15.3	15.2	15.0	14.9	14.8	14.7	14.5	900
1000	22.7	22.3	21.9	21.5	21.2	20.8	20.5	20.2	19.9	19.7	19.4	19.1	18.9	18.7	18.5	18.3	18.0	17.9	17.7	17.5	17.3	17.1	17.0	16.8	16.7	16.5	16.4	16.3	16.1	16.0	1000
1100	24.7	24.2	23.8	23.4	23.0	22.7	22.3	22.0	21.7	21.4	21.1	20.9	20.6	20.4	20.1	19.9	19.7	19.5	19.3	19.1	18.9	18.7	18.5	18.4	18.2	18.0	17.9	17.7	17.6	17.5	1100
1200	26.7	26.2	25.8	25.3	24.9	24.5	24.2	23.8	23.5	23.2	22.9	22.6	22.3	22.0	21.8	21.5	21.3	21.1	20.9	20.7	20.5	20.3	20.1	19.9	19.7	19.5	19.4	19.2	19.1	18.9	1200
1300	28.7	28.2	27.7	27.2	26.8	26.4	26.0	25.6	25.3	24.9	24.6	24.3	24.0	23.7	23.4	23.2	22.9	22.7	22.5	22.2	22.0	21.8	21.6	21.4	21.2	21.0	20.9	20.7	20.5	20.4	1300
1400	30.7	30.2	29.6	29.2	28.7	28.3	27.8	27.4	27.1	26.7	26.4	26.0	25.7	25.4	25.1	24.8	24.6	24.3	24.1	23.8	23.6	23.4	23.1	22.9	22.7	22.5	22.4	22.2	22.0	21.8	1400
1500	32.7	32.1	31.6	31.1	30.6	30.1	29.7	29.2	28.8	28.5	28.1	27.7	27.4	27.1	26.8	26.5	26.2	25.9	25.7	25.4	25.2	24.9	24.7	24.5	24.3	24.1	23.9	23.7	23.5	23.3	1500
Term. 2/	2.578	2.506	2.439	2.374	2.314	2.256	2.201	2.148	2.098	2.051	2.005	1.962	1.920	1.880	1.841	1.805	1.769	1.735	1.702	1.671	1.641	1.611	1.583	1.556	1.529	1.504	1.479	1.455	1.432	1.410	Term. 2/
L. H. 3/	.020069	.019751	.019432	.019130	.018844	.018571	.018312	.018065	.017830	.017606	.017391	.017186	.016989	.016801	.016620	.016447	.016280	.016120	.015966	.015818	.015675	.015537	.015404	.015275	.015151	.015031	.014915	.014802	.014694	.014588	L. H. 3/

1/ Based on a tare weight of 22.9 tons and a ratio of empty car miles to loaded car miles of 0.378. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.20.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.29.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 7 - Southwestern, incl, Southern Missouri

FLAT CARS

TABLE 44.--TERRITORY NO. 7 - SOUTHWESTERN, including Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	19.0	15.9	13.6	11.9	10.6	9.6	8.7	8.0	7.4	6.9	6.4	6.0	5.7	5.3	5.1	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.3	3.2	3.1	3.0	3.0	2.9	10
20	20.0	16.7	14.4	12.6	11.2	10.1	9.2	8.4	7.8	7.3	6.8	6.4	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	20
30	21.0	17.6	15.1	13.2	11.8	10.6	9.7	8.9	8.2	7.7	7.2	6.7	6.4	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	30
40	22.0	18.4	15.8	13.9	12.4	11.2	10.2	9.4	8.7	8.1	7.6	7.1	6.7	6.3	6.0	5.7	5.5	5.3	5.0	4.8	4.7	4.5	4.3	4.2	4.1	3.9	3.8	3.7	3.6	3.5	40
50	23.0	19.3	16.6	14.5	13.0	11.7	10.7	9.8	9.1	8.5	7.9	7.5	7.1	6.7	6.4	6.1	5.8	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.0	3.9	3.8	3.7	50
60	24.0	20.1	17.3	15.2	13.6	12.2	11.2	10.3	9.5	8.9	8.3	7.8	7.4	7.0	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.0	3.9	60
70	25.0	20.9	18.0	15.8	14.1	12.8	11.7	10.7	10.0	9.3	8.7	8.2	7.8	7.4	7.0	6.7	6.4	6.1	5.9	5.7	5.4	5.3	5.1	4.9	4.8	4.6	4.5	4.4	4.3	4.2	70
80	26.0	21.8	18.8	16.5	14.7	13.3	12.2	11.2	10.4	9.7	9.1	8.6	8.1	7.7	7.3	7.0	6.7	6.4	6.2	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.7	4.6	4.5	4.4	80
90	27.0	22.6	19.5	17.1	15.3	13.9	12.7	11.7	10.8	10.1	9.5	8.9	8.4	8.0	7.6	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	5.1	5.0	4.8	4.7	4.6	90
100	28.0	23.5	20.2	17.8	15.9	14.4	13.2	12.1	11.3	10.5	9.9	9.3	8.8	8.4	8.0	7.6	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.7	5.5	5.3	5.2	5.0	4.9	4.8	100
120	30.0	25.2	21.7	19.1	17.1	15.5	14.2	13.1	12.1	11.3	10.6	10.0	9.5	9.0	8.6	8.2	7.9	7.6	7.3	7.0	6.8	6.5	6.3	6.1	6.0	5.8	5.6	5.5	5.4	5.2	120
140	32.0	26.8	23.2	20.4	18.3	16.5	15.1	14.0	13.0	12.1	11.4	10.8	10.2	9.7	9.2	8.8	8.5	8.1	7.8	7.5	7.3	7.0	6.8	6.6	6.4	6.3	6.1	5.9	5.8	5.7	140
160	34.0	28.5	24.6	21.7	19.4	17.6	16.1	14.9	13.9	13.0	12.2	11.5	10.9	10.4	9.9	9.4	9.1	8.7	8.4	8.1	7.8	7.6	7.3	7.1	6.9	6.7	6.5	6.4	6.2	6.1	160
180	36.0	30.2	26.1	23.0	20.6	18.7	17.1	15.8	14.7	13.8	12.9	12.2	11.6	11.0	10.5	10.1	9.7	9.3	8.9	8.6	8.3	8.1	7.8	7.6	7.4	7.2	7.0	6.8	6.7	6.5	180
200	38.0	31.9	27.6	24.3	21.8	19.8	18.1	16.7	15.6	14.6	13.7	13.0	12.3	11.7	11.2	10.7	10.2	9.9	9.5	9.2	8.9	8.6	8.3	8.1	7.9	7.7	7.5	7.3	7.1	6.9	200
220	40.0	33.6	29.0	25.6	23.0	20.9	19.1	17.7	16.4	15.4	14.5	13.7	13.0	12.4	11.8	11.3	10.8	10.4	10.1	9.7	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.4	220
240	41.9	35.3	30.5	26.9	24.2	21.9	20.1	18.6	17.3	16.2	15.3	14.4	13.7	13.0	12.4	11.9	11.4	11.0	10.6	10.2	9.9	9.6	9.3	9.1	8.8	8.6	8.4	8.2	8.0	7.8	240
260	43.9	37.0	32.0	28.2	25.3	23.0	21.1	19.5	18.2	17.0	16.0	15.2	14.4	13.7	13.1	12.5	12.0	11.6	11.2	10.8	10.4	10.1	9.8	9.5	9.3	9.0	8.8	8.6	8.4	8.2	260
280	45.9	38.6	33.4	29.5	26.5	24.1	22.1	20.4	19.0	17.8	16.8	15.9	15.1	14.4	13.7	13.2	12.6	12.2	11.7	11.3	11.0	10.6	10.3	10.0	9.8	9.5	9.3	9.1	8.8	8.7	280
300	47.9	40.3	34.9	30.8	27.7	25.2	23.1	21.4	19.9	18.6	17.6	16.6	15.8	15.0	14.4	13.8	13.2	12.7	12.3	11.9	11.5	11.1	10.8	10.5	10.2	10.0	9.7	9.5	9.3	9.1	300
320	49.9	42.0	36.4	32.1	28.9	26.2	24.1	22.3	20.8	19.5	18.3	17.3	16.5	15.7	15.0	14.4	13.8	13.3	12.8	12.4	12.0	11.7	11.3	11.0	10.7	10.4	10.2	9.9	9.7	9.5	320
340	51.9	43.7	37.8	33.5	30.0	27.3	25.1	23.2	21.6	20.3	19.1	18.1	17.2	16.4	15.6	15.0	14.4	13.9	13.4	13.0	12.5	12.2	11.8	11.5	11.2	10.9	10.6	10.4	10.2	9.9	340
360	53.9	45.4	39.3	34.8	31.2	28.4	26.1	24.1	22.5	21.1	19.9	18.8	17.9	17.0	16.3	15.6	15.0	14.5	14.0	13.5	13.1	12.7	12.3	12.0	11.7	11.4	11.1	10.8	10.6	10.4	360
380	55.9	47.1	40.8	36.1	32.4	29.5	27.0	25.0	23.4	21.9	20.6	19.5	18.6	17.7	16.9	16.2	15.6	15.0	14.5	14.0	13.6	13.2	12.8	12.5	12.1	11.8	11.5	11.3	11.0	10.8	380
400	57.9	48.8	42.2	37.4	33.6	30.5	28.0	26.0	24.2	22.7	21.4	20.3	19.3	18.4	17.6	16.9	16.2	15.6	15.1	14.6	14.1	13.7	13.3	12.9	12.6	12.3	12.0	11.7	11.5	11.2	400
420	59.9	50.4	43.7	38.7	34.7	31.6	29.0	26.9	25.1	23.5	22.2	21.0	20.0	19.0	18.2	17.5	16.8	16.2	15.6	15.1	14.6	14.2	13.8	13.4	13.1	12.8	12.5	12.2	11.9	11.7	420
440	61.9	52.1	45.2	40.0	35.9	32.7	30.0	27.8	25.9	24.3	23.0	21.7	20.7	19.7	18.9	18.1	17.4	16.8	16.2	15.7	15.2	14.7	14.3	13.9	13.6	13.2	12.9	12.6	12.3	12.1	440
460	63.8	53.8	46.7	41.3	37.1	33.8	31.0	28.7	26.8	25.2	23.7	22.5	21.4	20.4	19.5	18.7	18.0	17.3	16.7	16.2	15.7	15.2	14.8	14.4	14.0	13.7	13.4	13.1	12.8	12.5	460
480	65.8	55.5	48.1	42.6	38.3	34.8	32.0	29.7	27.7	26.0	24.5	23.2	22.1	21.0	20.1	19.3	18.6	17.9	17.3	16.7	16.2	15.7	15.3	14.9	14.5	14.2	13.8	13.5	13.2	12.9	480
500	67.8	57.2	49.6	43.9	39.5	35.9	33.0	30.6	28.5	26.8	25.3	23.9	22.8	21.7	20.8	19.9	19.2	18.5	17.9	17.3	16.7	16.3	15.8	15.4	15.0	14.6	14.3	14.0	13.6	13.4	500
600	77.8	65.6	56.9	50.4	45.3	41.3	38.0	35.2	32.9	30.8	29.1	27.6	26.2	25.1	24.0	23.0	22.1	21.4	20.6	20.0	19.4	18.8	18.3	17.8	17.4	16.9	16.5	16.2	15.8	15.5	600
700	87.7	74.0	64.3	56.9	51.2	46.7	42.9	39.8	37.2	34.9	33.0	31.2	29.7	28.4	27.2	26.1	25.1	24.2	23.4	22.7	22.0	21.4	20.8	20.2	19.7	19.3	18.8	18.4	18.0	17.7	700
800	97.7	82.5	71.6	63.4	57.1	52.0	47.9	44.4	41.5	39.0	36.8	34.9	33.2	31.7	30.4	29.2	28.1	27.1	26.2	25.4	24.6	23.9	23.3	22.7	22.1	21.6	21.1	20.6	20.2	19.8	800
900	107.7	90.9	78.9	70.0	63.0	57.4	52.8	49.0	45.8	43.0	40.7	38.6	36.7	35.1	33.6	32.3	31.1	30.0	29.0	28.1	27.3	26.5	25.8	25.1	24.5	23.9	23.4	22.9	22.4	21.9	900
1000	117.6	99.3	86.3	76.5	68.9	62.8	57.8	53.6	50.1	47.1	44.5	42.2	40.2	38.4	36.8	35.4	34.1	32.9	31.8	30.8	29.9	29.0	28.3	27.5	26.9	26.2	25.6	25.1	24.6	24.1	1000
1100	127.6	107.8	93.6	83.0	74.8	68.2	62.8	58.3	54.4	51.2	48.4	45.9	43.7	41.8	40.0	38.5	37.0	35.8	34.6	33.5	32.5	31.6	30.8	30.0	29.2	28.6	27.9	27.3	26.7	26.2	1100
1200	137.5	116.2	101.0	89.5	80.6	73.5	67.7	62.9	58.8	55.3	52.2	49.5	47.2	45.1	43.2	41.5	40.0	38.6	37.4	36.2	35.1	34.2	33.2	32.4	31.6	30.9	30.2	29.5	28.9	28.4	1200
1300	147.5	124.6	108.3	96.1	86.5	78.9	72.7	67.5	63.1	59.3	56.1	53.2	50.7	48.4	46.4	44.6	43.0	41.5	40.2	38.9	37.8	36.7	35.7	34.8	34.0	33.2	32.5	31.8	31.1	30.5	1300
1400	157.4	133.1	115.6	102.6	92.4	84.3	77.6	72.1	67.4	63.4	59.9	56.9	54.2	51.8	49.6	47.7	46.0	44.4	42.9	41.6	40.4	39.3	38.2	37.3	36.4	35.5	34.7	34.0	33.3	32.6	1400
1500	167.4	141.5	123.0	109.1	98.3	89.7	82.6	76.7	71.7	67.5	63.8	60.5	57.7	55.1	52.8	50.8	48.9	47.3	45.7	44.3	43.0	41.8	40.7	39.7	38.7	37.8	37.0	36.2	35.5	34.8	1500
Term. 2/	18.046	15.038	12.890	11.279	10.026	9.023	8.203	7.519	6.941	6.445	6.015	5.639	5.308	5.013	4.749	4.512	4.297	4.101	3.923	3.760	3.609	3.470	3.342	3.223	3.111	3.008	2.911	2.820	2.734	2.654	Term. 2/
L. H. 3/	.099570	.084300	.073393	.065213	.058850	.053760	.049595	.046125	.043188	.040671	.038490	.036581	.034897	.033400	.032061	.030855	.029764	.028773	.027867	.027038	.026274	.025569	.024917	.024311	.023747	.023220	.022727	.022266	.021832	.021424	L. H. 3/

1/ Based on a tare weight of 18.5 tons and a ratio of empty car miles to loaded car miles of 0.676. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.20.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.29.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value; including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 44 (Concluded).—TERRITORY NO. 7 - SOUTHWESTERN, including Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																														Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	10
20	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	20
30	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	30
40	3.4	3.3	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	40
50	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	50
60	3.8	3.7	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	60
70	4.1	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	70
80	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	80
90	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.8	90
100	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	2.9	100
120	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	120
140	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	140
160	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	160
180	6.4	6.2	6.1	6.0	5.9	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	180
200	6.8	6.6	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	200
220	7.2	7.1	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	220
240	7.6	7.5	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.5	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	5.0	240
260	8.0	7.9	7.7	7.6	7.4	7.3	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.6	5.5	5.4	5.4	5.3	260
280	8.5	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	280
300	8.9	8.7	8.5	8.4	8.2	8.1	7.9	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.2	6.1	6.1	6.0	5.9	300
320	9.3	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.4	6.3	6.2	320
340	9.7	9.5	9.4	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.6	6.5	340
360	10.2	9.9	9.8	9.6	9.4	9.2	9.1	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	7.0	6.9	6.8	360
380	10.6	10.4	10.2	10.0	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.2	380
400	11.0	10.8	10.6	10.4	10.2	10.0	9.9	9.7	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.5	400
420	11.4	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.8	7.8	420
440	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	8.1	440
460	12.3	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.7	10.5	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.8	8.7	8.6	8.5	8.4	8.4	460
480	12.7	12.4	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.7	480
500	13.1	12.8	12.6	12.4	12.2	12.0	11.7	11.6	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.4	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	9.0	500
600	15.2	14.9	14.6	14.4	14.1	13.9	13.7	13.5	13.3	13.1	12.9	12.7	12.5	12.4	12.2	12.1	11.9	11.8	11.7	11.5	11.4	11.3	11.2	11.1	11.0	10.9	10.8	10.7	10.6	10.5	600
700	17.3	17.0	16.7	16.4	16.1	15.8	15.6	15.3	15.1	14.9	14.7	14.5	14.3	14.1	14.0	13.8	13.5	13.3	13.2	13.0	12.9	12.8	12.6	12.5	12.4	12.3	12.2	12.1	12.0	700
800	19.4	19.0	18.7	18.4	18.1	17.8	17.5	17.2	17.0	16.7	16.5	16.3	16.1	15.9	15.7	15.5	15.3	15.1	15.0	14.8	14.7	14.5	14.4	14.2	14.1	14.0	13.8	13.7	13.6	13.5	800
900	21.5	21.1	20.7	20.4	20.0	19.7	19.4	19.1	18.8	18.6	18.3	18.1	17.8	17.6	17.4	17.2	17.0	16.8	16.6	16.5	16.3	16.1	16.0	15.8	15.7	15.5	15.4	15.3	15.1	15.0	900
1000	23.6	23.2	22.8	22.4	22.0	21.7	21.3	21.0	20.7	20.4	20.1	19.9	19.6	19.4	19.1	18.9	18.7	18.5	18.3	18.1	17.9	17.7	17.6	17.4	17.2	17.1	16.9	16.8	16.7	16.5	1000
1100	25.7	25.2	24.8	24.4	24.0	23.6	23.2	22.9	22.6	22.2	21.9	21.7	21.4	21.1	20.9	20.6	20.4	20.2	20.0	19.7	19.5	19.4	19.2	19.0	18.8	18.6	18.5	18.3	18.2	18.0	1100
1200	27.8	27.3	26.8	26.4	25.9	25.5	25.1	24.8	24.4	24.1	23.8	23.5	23.2	22.9	22.6	22.3	22.1	21.8	21.6	21.4	21.2	21.0	20.8	20.6	20.4	20.2	20.0	19.9	19.7	19.5	1200
1300	29.9	29.4	28.9	28.4	27.9	27.5	27.1	26.7	26.3	25.9	25.6	25.2	24.9	24.6	24.3	24.1	23.8	23.5	23.3	23.0	22.8	22.6	22.4	22.2	22.0	21.8	21.6	21.4	21.2	21.1	1300
1400	32.0	31.5	30.9	30.4	29.9	29.4	29.0	28.5	28.1	27.8	27.4	27.0	26.7	26.4	26.1	25.8	25.5	25.2	24.9	24.7	24.4	24.2	24.0	23.7	23.5	23.3	23.1	22.9	22.7	22.6	1400
1500	34.1	33.5	32.9	32.4	31.9	31.4	30.9	30.4	30.0	29.6	29.2	28.8	28.5	28.1	27.8	27.5	27.2	26.9	26.6	26.3	26.1	25.8	25.6	25.3	25.1	24.9	24.7	24.5	24.3	24.1	1500
Term. 2/	2.578	2.506	2.439	2.374	2.314	2.256	2.201	2.148	2.098	2.051	2.005	1.962	1.920	1.880	1.841	1.805	1.769	1.735	1.702	1.671	1.641	1.611	1.583	1.556	1.529	1.504	1.479	1.455	1.432	1.410	Term. 2/
L. H. 3/	.021039	.020675	.020331	.020005	.019696	.019403	.019123	.018857	.018603	.018361	.018130	.017909	.017697	.017494	.017299	.017112	.016932	.016760	.016593	.016433	.016279	.016130	.015987	.015848	.015714	.015585	.015460	.015339	.015221	.015108	L. H. 3/

1/ Based on a tare weight of 18.5 tons and a ratio of empty car miles to loaded car miles of 0.676. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.20.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.29.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 7 - Southwestern, incl. Southern Missouri

GONDOLA AND HOPPER CARS

TABLE 45.—TERRITORY NO. 7 - SOUTHWESTERN, including Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	19.2	16.0	13.7	12.0	10.7	9.6	8.8	8.0	7.4	6.9	6.5	6.1	5.7	5.4	5.1	4.9	4.6	4.4	4.2	4.1	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	10
20	20.4	17.0	14.6	12.8	11.4	10.3	9.3	8.6	7.9	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	20
30	21.5	18.0	15.4	13.5	12.1	10.9	9.9	9.1	8.4	7.8	7.3	6.9	6.5	6.2	5.8	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	3.4	30
40	22.7	19.0	16.3	14.3	12.7	11.5	10.5	9.6	8.9	8.3	7.8	7.3	6.9	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	40
50	23.9	19.9	17.2	15.1	13.4	12.1	11.1	10.2	9.4	8.8	8.2	7.7	7.3	6.9	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.1	4.0	3.8	50
60	25.0	20.9	18.0	15.8	14.1	12.7	11.6	10.7	9.9	9.2	8.7	8.1	7.7	7.3	6.9	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	4.1	60
70	26.2	21.9	18.9	16.6	14.8	13.4	12.2	11.2	10.4	9.7	9.1	8.6	8.1	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.4	4.3	70
80	27.3	22.9	19.7	17.3	15.5	14.0	12.8	11.8	10.9	10.2	9.5	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.7	4.6	80
90	28.5	23.9	20.6	18.1	16.2	14.6	13.3	12.3	11.4	10.6	10.0	9.4	8.9	8.4	8.0	7.7	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.3	5.2	5.1	4.9	4.8	90
100	29.7	24.9	21.4	18.8	16.8	15.2	13.9	12.8	11.9	11.1	10.4	9.8	9.3	8.8	8.4	8.0	7.7	7.4	7.1	6.8	6.6	6.3	6.1	6.0	5.8	5.6	5.5	5.3	5.2	5.0	100
120	32.0	26.8	23.1	20.4	18.2	16.5	15.1	13.9	12.9	12.0	11.3	10.7	10.1	9.6	9.1	8.7	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.1	6.0	5.8	5.7	5.5	120
140	34.3	28.8	24.8	21.9	19.6	17.7	16.2	14.9	13.9	13.0	12.2	11.5	10.9	10.3	9.9	9.4	9.0	8.7	8.3	8.0	7.8	7.5	7.3	7.0	6.8	6.6	6.5	6.3	6.1	6.0	140
160	36.6	30.7	26.5	23.4	20.9	19.0	17.3	16.0	14.9	13.9	13.1	12.3	11.7	11.1	10.6	10.1	9.7	9.3	9.0	8.6	8.3	8.1	7.8	7.6	7.4	7.2	7.0	6.8	6.6	6.5	160
180	39.0	32.7	28.2	24.9	22.3	20.2	18.5	17.1	15.9	14.8	13.9	13.2	12.5	11.9	11.3	10.8	10.4	10.0	9.6	9.3	8.9	8.6	8.4	8.1	7.9	7.7	7.5	7.3	7.1	7.0	180
200	41.3	34.7	29.9	26.4	23.6	21.4	19.6	18.1	16.9	15.8	14.8	14.0	13.3	12.6	12.0	11.5	11.0	10.6	10.2	9.9	9.5	9.2	8.9	8.7	8.4	8.2	8.0	7.8	7.6	7.4	200
220	43.6	36.6	31.7	27.9	25.0	22.7	20.8	19.2	17.9	16.7	15.7	14.8	14.1	13.4	12.8	12.2	11.7	11.3	10.8	10.5	10.1	9.8	9.5	9.2	9.0	8.7	8.5	8.3	8.1	7.9	220
240	45.9	38.6	33.4	29.4	26.4	23.9	21.9	20.3	18.8	17.6	16.6	15.7	14.9	14.1	13.5	12.9	12.4	11.9	11.5	11.1	10.7	10.4	10.1	9.8	9.5	9.2	9.0	8.8	8.6	8.4	240
260	48.3	40.6	35.1	30.9	27.7	25.2	23.1	21.3	19.8	18.6	17.5	16.5	15.7	14.9	14.2	13.6	13.1	12.6	12.1	11.7	11.3	10.9	10.6	10.3	10.0	9.8	9.5	9.3	9.1	8.9	260
280	50.6	42.5	36.8	32.5	29.1	26.4	24.2	22.4	20.8	19.5	18.3	17.3	16.4	15.7	15.0	14.3	13.7	13.2	12.7	12.3	11.9	11.5	11.2	10.9	10.6	10.3	10.0	9.8	9.6	9.3	280
300	52.9	44.5	38.5	34.0	30.5	27.6	25.4	23.4	21.8	20.4	19.2	18.2	17.2	16.4	15.7	15.0	14.4	13.9	13.4	12.9	12.5	12.1	11.7	11.4	11.1	10.8	10.5	10.3	10.0	9.8	300
320	55.2	46.5	40.2	35.5	31.8	28.9	26.5	24.5	22.8	21.4	20.1	19.0	18.0	17.2	16.4	15.7	15.1	14.5	14.0	13.5	13.1	12.7	12.3	12.0	11.6	11.3	11.0	10.8	10.5	10.3	320
340	57.6	48.4	41.9	37.0	33.2	30.1	27.6	25.6	23.8	22.3	21.0	19.8	18.8	17.9	17.1	16.4	15.8	15.2	14.6	14.1	13.7	13.3	12.9	12.5	12.2	11.8	11.6	11.3	11.0	10.8	340
360	59.9	50.4	43.6	38.5	34.5	31.4	28.8	26.6	24.8	23.2	21.9	20.7	19.5	18.7	17.9	17.1	16.4	15.8	15.3	14.7	14.3	13.8	13.4	13.0	12.7	12.4	12.1	11.8	11.5	11.2	360
380	62.2	52.3	45.3	40.0	35.9	32.6	29.9	27.7	25.8	24.2	22.7	21.5	20.4	19.5	18.6	17.8	17.1	16.5	15.9	15.4	14.9	14.4	14.0	13.6	13.2	12.9	12.6	12.3	12.0	11.7	380
400	64.5	54.3	47.0	41.5	37.3	33.9	31.1	28.7	26.8	25.1	23.6	22.4	21.2	20.2	19.3	18.5	17.8	17.1	16.5	16.0	15.4	15.0	14.5	14.1	13.8	13.4	13.1	12.8	12.5	12.2	400
420	66.9	56.3	48.7	43.0	38.6	35.1	32.2	29.8	27.8	26.0	24.5	23.2	22.0	21.0	20.1	19.2	18.5	17.8	17.1	16.6	16.0	15.6	15.1	14.7	14.3	13.9	13.6	13.3	13.0	12.7	420
440	69.2	58.2	50.4	44.5	40.0	36.3	33.4	30.9	28.8	27.0	25.4	24.0	22.8	21.7	20.8	19.9	19.1	18.4	17.8	17.2	16.6	16.1	15.7	15.2	14.8	14.4	14.1	13.8	13.4	13.2	440
460	71.5	60.2	52.1	46.1	41.3	37.6	34.5	31.9	29.8	27.9	26.3	24.9	23.6	22.5	21.5	20.6	19.8	19.1	18.4	17.8	17.2	16.7	16.2	15.8	15.4	15.0	14.6	14.3	13.9	13.6	460
480	73.8	62.2	53.8	47.6	42.7	38.8	35.6	33.0	30.7	28.8	27.2	25.7	24.4	23.3	22.2	21.3	20.5	19.7	19.0	18.4	17.8	17.3	16.8	16.3	15.9	15.5	15.1	14.8	14.4	14.1	480
500	76.2	64.1	55.5	49.1	44.1	40.1	36.8	34.0	31.7	29.8	28.0	26.5	25.2	24.0	23.0	22.0	21.2	20.4	19.7	19.0	18.4	17.9	17.3	16.9	16.4	16.0	15.6	15.3	14.9	14.6	500
600	87.8	73.9	64.1	56.6	50.9	46.3	42.5	39.4	36.7	34.4	32.4	30.7	29.2	27.8	26.6	25.5	24.5	23.6	22.8	22.1	21.4	20.7	20.1	19.6	19.1	18.6	18.2	17.7	17.3	17.0	600
700	99.4	83.8	72.6	64.2	57.7	52.5	48.2	44.7	41.7	39.1	36.8	34.9	33.2	31.6	30.3	29.0	27.9	26.9	26.0	25.1	24.3	23.6	22.9	22.3	21.7	21.2	20.7	20.2	19.8	19.4	700
800	111.0	93.6	81.1	71.8	64.5	58.7	53.9	50.0	46.6	43.7	41.2	39.1	37.1	35.4	33.9	32.5	31.3	30.1	29.1	28.2	27.3	26.5	25.7	25.0	24.4	23.8	23.2	22.7	22.2	21.8	800
900	122.6	103.4	89.6	79.3	71.3	64.9	59.6	55.3	51.6	48.4	45.6	43.2	41.1	39.2	37.5	36.0	34.7	33.4	32.3	31.2	30.3	29.4	28.5	27.8	27.1	26.4	25.8	25.2	24.7	24.2	900
1000	134.3	113.2	98.2	86.9	78.1	71.1	63.4	60.6	56.5	53.1	50.1	47.4	45.1	43.0	41.2	39.5	38.0	36.7	35.4	34.3	33.2	32.2	31.3	30.5	29.7	29.0	28.3	27.7	27.1	26.5	1000
1100	145.9	123.0	106.7	94.5	84.9	77.3	71.1	65.9	61.5	57.7	54.5	51.6	49.1	46.8	44.8	43.0	41.4	39.9	38.6	37.3	36.2	35.1	34.1	33.2	32.4	31.6	30.9	30.2	29.5	28.9	1100
1200	157.5	132.8	115.2	102.0	91.7	83.5	76.8	71.2	66.4	62.4	58.9	55.8	53.1	50.6	48.5	46.5	44.8	43.2	41.7	40.4	39.1	38.0	36.9	36.0	35.1	34.2	33.4	32.7	32.0	31.3	1200
1300	169.1	142.7	123.8	109.6	98.5	89.7	82.5	76.5	71.4	67.0	63.3	60.0	57.0	54.4	52.1	50.0	48.1	46.4	44.9	43.4	42.1	40.9	39.7	38.7	37.7	36.8	35.9	35.1	34.4	33.7	1300
1400	180.7	152.5	132.3	117.1	105.4	95.9	88.2	81.8	76.4	71.7	67.7	64.1	61.0	58.2	55.8	53.5	51.5	49.7	48.0	46.5	45.1	43.7	42.5	41.4	40.4	39.4	38.5	37.6	36.8	36.1	1400
1500	192.4	162.3	140.8	124.7	112.2	102.1	93.9	87.1	81.3	76.4	72.1	68.3	65.0	62.0	59.4	57.0	54.9	52.9	51.2	49.5	48.0	46.6	45.3	44.1	43.0	42.0	41.0	40.1	39.3	38.5	1500
Term. 2/	18.046	15.038	12.890	11.279	10.026	9.023	8.203	7.519	6.941	6.445	6.015	5.639	5.308	5.013	4.749	4.512	4.297	4.101	3.923	3.760	3.609	3.470	3.342	3.223	3.111	3.008	2.911	2.820	2.734	2.654	Term. 2/
L. H. 3/	.116210	.098167	.085279	.075613	.068094	.062080	.057159	.053058	.049588	.046614	.044037	.041781	.039791	.038022	.036439	.035015	.033726	.032555	.031485	.030504	.029602	.028769	.027998	.027282	.026616	.025993	.025411	.024866	.024353	.023871	L. H. 3/

1/ Based on a tare weight of 21.9 tons and a ratio of empty car miles to loaded car miles of 0.802. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.20.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.29.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the costscale.

TABLE 45 (Concluded).--TERRITORY NO. 7 - SOUTHWESTERN, including Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.6	10
20	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	20
30	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	30
40	3.5	3.4	3.3	3.3	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	40
50	3.7	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	50
60	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.4	60
70	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	70
80	4.5	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.7	80
90	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	90
100	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	100
120	5.4	5.3	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3.4	120
140	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	140
160	6.3	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	160
180	6.8	6.6	6.5	6.4	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	180
200	7.3	7.1	7.0	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	200
220	7.7	7.6	7.4	7.3	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	5.0	220
240	8.2	8.0	7.9	7.7	7.6	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	5.4	5.3	240
260	8.7	8.5	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	6.0	5.9	5.9	5.8	5.7	5.7	260
280	9.1	8.9	8.8	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	280
300	9.6	9.4	9.2	9.0	8.9	8.7	8.5	8.4	8.3	8.1	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	6.3	300
320	10.1	9.9	9.7	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.7	320
340	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.2	9.1	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.1	7.0	340
360	11.0	10.8	10.6	10.4	10.2	10.0	9.8	9.6	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.3	8.2	8.1	8.0	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	360
380	11.5	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.7	9.6	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.8	7.7	7.6	380
400	11.9	11.7	11.5	11.3	11.0	10.8	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.5	8.4	8.3	8.2	8.1	8.0	400
420	12.4	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.6	10.4	10.2	10.1	10.0	9.8	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.5	8.4	8.3	420
440	12.9	12.6	12.4	12.1	11.9	11.7	11.5	11.3	11.1	11.0	10.8	10.6	10.5	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	440
460	13.3	13.1	12.8	12.6	12.4	12.1	11.9	11.7	11.5	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	9.0	460
480	13.8	13.5	13.3	13.0	12.8	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.7	9.7	9.6	9.5	9.4	9.3	480
500	14.3	14.0	13.7	13.5	13.2	13.0	12.8	12.6	12.4	12.2	12.0	11.8	11.7	11.5	11.3	11.2	11.1	10.9	10.8	10.7	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	500
600	16.6	16.3	16.0	15.7	15.4	15.1	14.9	14.7	14.4	14.2	14.0	13.8	13.6	13.4	13.2	13.1	12.9	12.8	12.6	12.5	12.3	12.2	12.1	11.9	11.8	11.7	11.6	11.5	11.4	11.3	600
700	19.0	18.6	18.2	17.9	17.6	17.3	17.0	16.7	16.5	16.2	16.0	15.8	15.5	15.3	15.1	14.9	14.8	14.6	14.4	14.3	14.1	13.9	13.8	13.7	13.5	13.4	13.3	13.1	13.0	12.9	700
800	21.3	20.9	20.5	20.1	19.8	19.4	19.1	18.8	18.5	18.3	18.0	17.7	17.5	17.3	17.0	16.8	16.6	16.4	16.2	16.1	15.9	15.7	15.5	15.4	15.2	15.1	14.9	14.8	14.7	14.5	800
900	23.7	23.2	22.8	22.3	22.0	21.6	21.2	20.9	20.6	20.3	20.0	19.7	19.4	19.2	18.9	18.7	18.5	18.3	18.0	17.8	17.7	17.5	17.3	17.1	16.9	16.8	16.6	16.5	16.3	16.2	900
1000	26.0	25.5	25.0	24.6	24.1	23.7	23.4	23.0	22.6	22.3	22.0	21.7	21.4	21.1	20.8	20.6	20.3	20.1	19.9	19.6	19.4	19.2	19.0	18.8	18.7	18.5	18.3	18.1	18.0	17.8	1000
1100	28.3	27.8	27.3	26.8	26.3	25.9	25.5	25.1	24.7	24.3	24.0	23.7	23.3	23.0	22.7	22.5	22.2	21.9	21.7	21.4	21.2	21.0	20.8	20.6	20.4	20.2	20.0	19.8	19.6	19.5	1100
1200	30.7	30.1	29.5	29.0	28.5	28.0	27.6	27.2	26.7	26.4	26.0	25.6	25.3	25.0	24.6	24.3	24.0	23.8	23.5	23.2	23.0	22.8	22.5	22.3	22.1	21.9	21.7	21.5	21.3	21.1	1200
1300	33.0	32.4	31.8	31.2	30.7	30.2	29.7	29.2	28.8	28.4	28.0	27.6	27.2	26.9	26.5	26.2	25.9	25.6	25.3	25.0	24.8	24.5	24.3	24.0	23.8	23.6	23.4	23.1	22.9	22.7	1300
1400	35.4	34.7	34.1	33.4	32.9	32.3	31.8	31.3	30.9	30.4	30.0	29.6	29.2	28.8	28.4	28.1	27.8	27.4	27.1	26.8	26.5	26.3	26.0	25.8	25.5	25.3	25.0	24.8	24.6	24.4	1400
1500	37.7	37.0	36.3	35.7	35.1	34.5	33.9	33.4	32.9	32.4	32.0	31.5	31.1	30.7	30.3	30.0	29.6	29.3	28.9	28.6	28.3	28.0	27.8	27.5	27.2	27.0	26.7	26.5	26.2	26.0	1500
Term. 2/	2.578	2.506	2.439	2.374	2.314	2.256	2.201	2.148	2.098	2.051	2.005	1.962	1.920	1.880	1.841	1.805	1.769	1.735	1.702	1.671	1.641	1.611	1.583	1.556	1.529	1.504	1.479	1.455	1.432	1.410	Term. 2/
L. H. 3/	.023416	.022986	.022580	.022195	.021829	.021483	.021152	.020838	.020538	.020252	.019979	.019717	.019467	.019227	.018997	.018776	.018564	.018360	.018163	.017974	.017792	.017616	.017446	.017283	.017125	.016972	.016824	.016681	.016542	.016408	L. H. 3/

1/ Based on a tare weight of 21.9 tons and a ratio of empty car miles to loaded car miles of 0.802. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.20.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.29.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Lev V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 7 - Southeastern, incl. Southern Missouri

TANK CARS

TABLE 46.--TERRITORY NO. 7 - SOUTHWESTERN, including Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	16.5	13.7	11.8	10.3	9.2	8.3	7.5	6.9	6.4	5.9	5.5	5.2	4.9	4.6	4.4	4.2	4.0	3.8	3.6	3.5	3.4	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.6	2.5	10
20	17.8	14.9	12.8	11.2	10.0	9.0	8.2	7.5	7.0	6.5	6.1	5.7	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.8	20
30	19.2	16.0	13.8	12.1	10.8	9.7	8.9	8.1	7.5	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.8	4.5	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	30
40	20.6	17.2	14.8	13.0	11.6	10.4	9.5	8.8	8.1	7.5	7.1	6.6	6.3	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	3.3	40
50	21.9	18.3	15.8	13.8	12.4	11.2	10.2	9.4	8.7	8.1	7.6	7.1	6.7	6.4	6.1	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	3.7	3.6	50
60	23.3	19.5	16.8	14.7	13.1	11.9	10.8	10.0	9.2	8.6	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.7	5.4	5.2	5.0	4.9	4.7	4.5	4.4	4.3	4.2	4.0	3.9	3.8	60
70	24.6	20.6	17.8	15.6	13.9	12.6	11.5	10.6	9.8	9.2	8.6	8.1	7.6	7.2	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	4.1	70
80	26.0	21.8	18.7	16.5	14.7	13.3	12.2	11.2	10.4	9.7	9.1	8.6	8.1	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.7	4.6	4.5	4.4	80
90	27.3	22.9	19.7	17.4	15.5	14.0	12.8	11.8	11.0	10.2	9.6	9.0	8.5	8.1	7.7	7.4	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.5	5.3	5.2	5.0	4.9	4.8	4.6	90
100	28.7	24.1	20.7	18.2	16.3	14.8	13.5	12.4	11.5	10.8	10.1	9.5	9.0	8.5	8.1	7.8	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.2	5.0	4.9	100
120	31.4	26.3	22.7	20.0	17.9	16.2	14.8	13.6	12.7	11.8	11.1	10.5	9.9	9.4	9.0	8.6	8.2	7.9	7.6	7.3	7.0	6.8	6.6	6.4	6.2	6.0	5.9	5.7	5.6	5.4	120
140	34.1	28.6	24.7	21.8	19.5	17.6	16.1	14.9	13.8	12.9	12.1	11.4	10.8	10.3	9.8	9.4	9.0	8.6	8.3	8.0	7.7	7.5	7.2	7.0	6.8	6.6	6.4	6.3	6.1	6.0	140
160	36.9	30.9	26.7	23.5	21.0	19.1	17.4	16.1	15.0	14.0	13.1	12.4	11.7	11.2	10.6	10.2	9.7	9.4	9.0	8.7	8.4	8.1	7.9	7.6	7.4	7.2	7.0	6.8	6.7	6.5	160
180	39.6	33.2	28.7	25.3	22.6	20.5	18.8	17.3	16.1	15.1	14.1	13.4	12.6	12.0	11.5	11.0	10.5	10.1	9.7	9.4	9.1	8.8	8.5	8.2	8.0	7.8	7.6	7.4	7.2	7.0	180
200	42.3	35.5	30.7	27.0	24.2	21.9	20.1	18.5	17.2	16.1	15.2	14.3	13.6	12.9	12.3	11.8	11.3	10.8	10.4	10.1	9.7	9.4	9.1	8.9	8.6	8.4	8.2	7.9	7.8	7.6	200
220	45.0	37.8	32.6	28.8	25.8	23.4	21.4	19.8	18.4	17.2	16.2	15.3	14.5	13.8	13.1	12.6	12.0	11.6	11.2	10.8	10.4	10.1	9.8	9.5	9.2	9.0	8.7	8.5	8.3	8.1	220
240	47.7	40.1	34.6	30.5	27.4	24.8	22.7	21.0	19.5	18.3	17.2	16.2	15.4	14.6	14.0	13.4	12.8	12.3	11.9	11.5	11.1	10.7	10.4	10.1	9.8	9.5	9.3	9.1	8.8	8.6	240
260	50.4	42.4	36.6	32.3	28.9	26.3	24.1	22.2	20.7	19.3	18.2	17.2	16.3	15.5	14.8	14.2	13.6	13.1	12.6	12.1	11.7	11.4	11.0	10.7	10.4	10.1	9.9	9.6	9.4	9.2	260
280	53.2	44.7	38.6	34.1	30.5	27.7	25.4	23.4	21.8	20.4	19.2	18.1	17.2	16.4	15.6	15.0	14.4	13.8	13.3	12.8	12.4	12.0	11.7	11.3	11.0	10.7	10.4	10.2	9.9	9.7	280
300	55.9	47.0	40.6	35.8	32.1	29.1	26.7	24.7	23.0	21.5	20.2	19.1	18.1	17.2	16.5	15.8	15.1	14.5	14.0	13.5	13.1	12.7	12.3	11.9	11.6	11.3	11.0	10.7	10.5	10.3	300
320	58.6	49.3	42.6	37.6	33.7	30.6	28.0	25.9	24.1	22.6	21.2	20.1	19.0	18.1	17.3	16.6	15.9	15.3	14.7	14.2	13.8	13.3	12.9	12.6	12.2	11.9	11.6	11.3	11.0	10.8	320
340	61.3	51.5	44.6	39.3	35.3	32.0	29.3	27.1	25.2	23.6	22.2	21.0	19.9	19.0	18.1	17.4	16.7	16.0	15.4	14.9	14.4	14.0	13.6	13.2	12.8	12.5	12.2	11.9	11.6	11.3	340
360	64.0	53.8	46.5	41.1	36.8	33.4	30.7	28.3	26.4	24.7	23.2	22.0	20.9	19.9	19.0	18.2	17.4	16.8	16.2	15.6	15.1	14.6	14.2	13.8	13.4	13.1	12.7	12.4	12.1	11.9	360
380	66.7	56.1	48.5	42.8	38.4	34.9	32.0	29.6	27.5	25.8	24.3	22.9	21.8	20.7	19.8	19.0	18.2	17.5	16.9	16.3	15.8	15.3	14.8	14.4	14.0	13.6	13.3	13.0	12.7	12.4	380
400	69.5	58.4	50.5	44.6	40.0	36.3	33.3	30.8	28.7	26.9	25.3	23.9	22.7	21.6	20.6	19.8	19.0	18.2	17.6	17.0	16.4	15.9	15.5	15.0	14.6	14.2	13.9	13.5	13.2	12.9	400
420	72.2	60.7	52.5	46.4	41.6	37.8	34.6	32.0	29.8	27.9	26.3	24.9	23.6	22.5	21.5	20.5	19.7	19.0	18.3	17.7	17.1	16.6	16.1	15.6	15.2	14.8	14.4	14.1	13.8	13.5	420
440	74.9	63.0	54.5	48.1	43.2	39.2	36.0	33.2	31.0	29.0	27.3	25.8	24.5	23.3	22.3	21.3	20.5	19.7	19.0	18.4	17.8	17.2	16.7	16.2	15.8	15.4	15.0	14.7	14.3	14.0	440
460	77.6	65.3	56.6	49.9	44.7	40.6	37.3	34.5	32.1	30.1	28.3	26.8	25.4	24.2	23.1	22.1	21.3	20.5	19.7	19.1	18.4	17.9	17.4	16.9	16.4	16.0	15.6	15.2	14.9	14.5	460
480	80.3	67.6	58.5	51.6	46.3	42.1	38.6	35.7	33.2	31.1	29.3	27.7	26.3	25.1	23.9	22.9	22.0	21.2	20.4	19.8	19.1	18.5	18.0	17.5	17.0	16.6	16.2	15.8	15.4	15.1	480
500	83.0	69.9	60.5	53.4	47.9	43.5	39.9	36.9	34.4	32.2	30.3	28.7	27.2	25.9	24.8	23.7	22.8	21.9	21.2	20.4	19.8	19.2	18.6	18.1	17.6	17.2	16.7	16.3	16.0	15.6	500
600	96.6	81.3	70.4	62.2	55.8	50.7	46.5	43.0	40.1	37.6	35.4	33.5	31.8	30.3	28.9	27.7	26.6	25.6	24.7	23.9	23.1	22.4	21.8	21.2	20.6	20.1	19.6	19.1	18.7	18.3	600
700	110.2	92.8	80.3	71.0	63.7	57.9	53.1	49.2	45.8	42.9	40.4	38.3	36.3	34.6	33.1	31.7	30.5	29.3	28.3	27.4	26.5	25.7	24.9	24.3	23.6	23.0	22.4	21.9	21.4	21.0	700
800	123.8	104.2	90.2	79.8	71.6	65.1	59.7	55.3	51.5	48.3	45.5	43.1	40.9	39.0	37.3	35.7	34.3	33.0	31.9	30.8	29.8	28.9	28.1	27.3	26.6	25.9	25.3	24.7	24.2	23.8	800
900	137.4	115.7	100.2	88.5	79.5	72.3	66.3	61.4	57.2	53.7	50.6	47.9	45.5	43.3	41.4	39.7	38.2	36.8	35.5	34.3	33.2	32.2	31.3	30.4	29.6	28.9	28.2	27.5	26.9	26.3	900
1000	151.0	127.1	110.1	97.3	87.4	79.5	73.0	67.5	63.0	59.0	55.6	52.6	50.0	47.7	45.6	43.7	42.0	40.5	39.0	37.7	36.6	35.5	34.4	33.5	32.6	31.8	31.0	30.3	29.6	29.0	1000
1100	164.5	138.6	120.0	106.1	95.3	86.6	79.6	73.7	68.7	64.4	60.7	57.4	54.6	52.0	49.7	47.7	45.8	44.2	42.6	41.2	39.9	38.7	37.6	36.6	35.6	34.7	33.9	33.1	32.4	31.7	1100
1200	178.1	150.0	130.0	114.9	103.2	93.6	86.2	79.8	74.4	69.8	65.7	62.2	59.1	56.4	53.9	51.7	49.7	47.9	46.2	44.7	43.3	42.0	40.8	39.6	38.6	37.6	36.7	35.9	35.1	34.3	1200
1300	191.7	161.5	139.9	123.7	111.1	101.0	92.8	85.9	80.1	75.1	70.8	67.0	63.7	60.7	58.1	55.7	53.5	51.6	49.8	48.1	46.6	45.2	43.9	42.7	41.6	40.6	39.6	38.7	37.8	37.0	1300
1400	205.3	172.9	149.8	132.5	119.0	108.2	99.4	92.0	85.8	80.5	75.9	71.8	68.2	65.1	62.2	59.7	57.4	55.3	53.3	51.6	50.0	48.5	47.1	45.8	44.6	43.5	42.4	41.5	40.5	39.7	1400
1500	218.9	184.4	159.8	141.3	126.9	115.4	106.0	98.2	91.5	85.8	80.9	76.6	72.8	69.4	66.4	63.7	61.2	59.0	56.9	55.0	53.3	51.7	50.2	48.9	47.6	46.4	45.3	44.3	43.3	42.4	1500
Term. 2/	15.122	12.602	10.801	9.451	8.401	7.561	6.874	6.301	5.816	5.401	5.041	4.726	4.448	4.201	3.979	3.781	3.600	3.437	3.287	3.150	3.024	2.908	2.800	2.700	2.607	2.520	2.439	2.363	2.291	2.224	Term. 2/
L. H. 3/	.135840	.114525	.099300	.087861	.079000	.071895	.066082	.061238	.057138	.053625	.050580	.047916	.045565	.043475	.041605	.039923	.038400	.037016	.035752	.034594	.033528	.032544	.031633	.030788	.030000	.029265	.028577	.027933	.027327	.026757	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.955. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.20.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.29.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 46 (Concluded).--TERRITORY NO. 7 - SOUTHWESTERN, including Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.4	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40	3.2	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.9	2.9	2.9	2.8	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
120	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
140	5.8	5.7	5.6	5.5	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
160	6.4	6.2	6.1	6.0	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
180	6.9	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
200	7.4	7.2	7.1	6.9	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
220	7.9	7.8	7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
240	8.5	8.3	8.1	7.9	7.8	7.6	7.5	7.4	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
260	9.0	8.8	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
280	9.5	9.3	9.1	8.9	8.8	8.6	8.4	8.3	8.1	8.0	7.9	7.8	7.6	7.5	7.4	7.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
300	10.0	9.8	9.6	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	8.0	7.8	7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
320	10.6	10.3	10.1	9.9	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.3	8.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
340	11.1	10.8	10.6	10.4	10.2	10.0	9.8	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.7	8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
360	11.6	11.4	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.2	9.1	9.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
380	12.1	11.9	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	9.9	9.8	9.7	9.5	9.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
400	12.6	12.4	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.1	9.9	9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
420	13.2	12.9	12.6	12.4	12.2	11.9	11.7	11.5	11.3	11.2	11.0	10.8	10.7	10.5	10.4	10.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
440	13.7	13.4	13.1	12.9	12.7	12.4	12.2	12.0	11.8	11.6	11.4	11.3	11.1	10.9	10.8	10.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
460	14.2	13.9	13.7	13.4	13.1	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.4	11.2	11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
480	14.7	14.4	14.2	13.9	13.6	13.4	13.1	12.9	12.7	12.5	12.3	12.1	12.0	11.8	11.6	11.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
500	15.3	15.0	14.7	14.4	14.1	13.9	13.6	13.4	13.2	13.0	12.8	12.6	12.4	12.2	12.0	11.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
600	17.9	17.5	17.2	16.9	16.5	16.3	16.0	15.7	15.5	15.2	15.0	14.8	14.5	14.3	14.1	14.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
700	20.5	20.1	19.7	19.3	19.0	18.6	18.3	18.0	17.7	17.5	17.2	16.9	16.7	16.5	16.2	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
800	23.1	22.7	22.2	21.8	21.4	21.0	20.7	20.3	20.0	19.7	19.4	19.1	18.9	18.6	18.3	18.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
900	25.8	25.2	24.8	24.3	23.9	23.4	23.0	22.7	22.3	22.0	21.6	21.3	21.0	20.7	20.4	20.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
1000	28.4	27.8	27.3	26.8	26.3	25.8	25.4	25.0	24.6	24.2	23.8	23.5	23.2	22.8	22.5	22.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
1100	31.0	30.4	29.8	29.2	28.7	28.2	27.7	27.3	26.9	26.4	26.1	25.7	25.3	25.0	24.6	24.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
1200	33.6	33.0	32.3	31.7	31.2	30.6	30.1	29.6	29.1	28.7	28.3	27.9	27.5	27.1	26.7	26.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1300	36.2	35.5	34.8	34.2	33.6	33.0	32.5	31.9	31.4	30.9	30.5	30.1	29.6	29.2	28.8	28.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
1400	38.9	38.1	37.4	36.7	36.0	35.4	34.8	34.2	33.7	33.2	32.7	32.2	31.8	31.4	30.9	30.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1500	41.5	40.7	39.9	39.2	38.5	37.8	37.2	36.6	36.0	35.4	34.9	34.4	33.9	33.5	33.0	32.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
Term. 2/	2.160	2.100	2.044	1.990	1.933	1.890	1.844	1.800	1.758	1.718	1.680	1.644	1.609	1.575	1.543	1.512	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.026220	.025713	.025232	.024778	.024346	.023936	.023546	.023175	.022821	.022483	.022160	.021851	.021555	.021272	.021000	.020739	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.955. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.20.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.29.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 7 - Southwestern, incl. Southern Missouri

STOCK CARS

TABLE 47.—TERRITORY NO. 7 - SOUTHWESTERN, including Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	19.2	16.0	13.7	12.0	10.7	9.6	8.8	8.0	7.4	6.9	6.5	6.1	5.7	5.4	5.1	4.9	4.6	4.4	4.2	4.1	3.9	3.8	3.6	3.5	3.4	3.3	-	-	-	-	10
20	20.4	17.0	14.6	12.8	11.4	10.3	9.3	8.6	7.9	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.7	4.5	4.4	4.2	4.0	3.9	3.8	3.6	3.5	-	-	-	-	20
30	21.5	18.0	15.4	13.5	12.1	10.9	9.9	9.1	8.4	7.8	7.3	6.9	6.5	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	-	-	-	-	30
40	22.7	18.9	16.3	14.3	12.7	11.5	10.5	9.6	8.9	8.3	7.8	7.3	6.9	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	-	-	-	-	40
50	23.8	19.9	17.1	15.0	13.4	12.1	11.0	10.2	9.4	8.8	8.2	7.7	7.3	6.9	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	-	-	-	-	50
60	25.0	20.9	18.0	15.8	14.1	12.7	11.6	10.7	9.9	9.2	8.6	8.1	7.7	7.3	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	-	-	-	-	60
70	26.1	21.9	18.8	16.5	14.8	13.3	12.2	11.2	10.4	9.7	9.1	8.5	8.1	7.7	7.3	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	-	-	-	-	70
80	27.3	22.8	19.7	17.3	15.4	14.0	12.7	11.7	10.9	10.2	9.5	9.0	8.5	8.0	7.6	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	5.1	-	-	-	-	80
90	28.4	23.8	20.5	18.0	16.1	14.6	13.3	12.3	11.4	10.6	10.0	9.4	8.9	8.4	8.0	7.6	7.3	7.0	6.7	6.5	6.3	6.0	5.8	5.7	5.5	5.3	-	-	-	-	90
100	29.6	24.8	21.4	18.8	16.8	15.2	13.9	12.8	11.9	11.1	10.4	9.8	9.3	8.8	8.4	8.0	7.6	7.3	7.1	6.8	6.6	6.3	6.1	5.9	5.8	5.6	-	-	-	-	100
120	31.9	26.7	23.1	20.3	18.1	16.4	15.0	13.8	12.9	12.0	11.3	10.6	10.1	9.5	9.1	8.7	8.3	8.0	7.7	7.4	7.1	6.9	6.7	6.5	6.3	6.1	-	-	-	-	120
140	34.2	28.7	24.7	21.8	19.5	17.7	16.2	14.9	13.8	12.9	12.1	11.5	10.8	10.3	9.8	9.4	9.0	8.6	8.3	8.0	7.7	7.5	7.2	7.0	6.8	6.6	-	-	-	-	140
160	36.5	30.6	26.4	23.3	20.8	18.9	17.3	16.0	14.8	13.9	13.0	12.3	11.6	11.1	10.5	10.1	9.7	9.3	8.9	8.6	8.3	8.0	7.8	7.6	7.3	7.1	-	-	-	-	160
180	38.8	32.6	28.1	24.8	22.2	20.1	18.4	17.0	15.8	14.8	13.9	13.1	12.4	11.8	11.3	10.8	10.3	9.9	9.6	9.2	8.9	8.6	8.4	8.1	7.9	7.7	-	-	-	-	180
200	41.1	34.5	29.8	26.3	23.6	21.4	19.6	18.1	16.8	15.7	14.8	13.9	13.2	12.6	12.0	11.5	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.4	8.2	-	-	-	-	200
220	43.4	36.5	31.5	27.8	24.9	22.6	20.7	19.1	17.8	16.6	15.6	14.8	14.0	13.3	12.7	12.2	11.7	11.2	10.8	10.4	10.1	9.8	9.5	9.2	8.9	8.7	-	-	-	-	220
240	45.7	38.4	33.2	29.3	26.3	23.8	21.8	20.2	18.8	17.6	16.5	15.6	14.8	14.1	13.4	12.9	12.3	11.9	11.4	11.0	10.7	10.3	10.0	9.7	9.5	9.2	-	-	-	-	240
260	48.0	40.4	34.9	30.8	27.6	25.1	23.0	21.2	19.8	18.5	17.4	16.4	15.6	14.8	14.2	13.6	13.0	12.5	12.1	11.6	11.3	10.9	10.6	10.3	10.0	9.7	-	-	-	-	260
280	50.4	42.3	36.6	32.3	29.0	26.3	24.1	22.3	20.7	19.4	18.3	17.3	16.4	15.6	14.9	14.3	13.7	13.2	12.7	12.3	11.9	11.5	11.1	10.8	10.5	10.2	-	-	-	-	280
300	52.7	44.3	38.3	33.8	30.3	27.5	25.2	23.3	21.7	20.3	19.1	18.1	17.2	16.4	15.6	15.0	14.4	13.8	13.3	12.9	12.4	12.1	11.7	11.4	11.1	10.8	-	-	-	-	300
320	55.0	46.2	40.0	35.3	31.7	28.8	26.4	24.4	22.7	21.3	20.0	18.9	18.0	17.1	16.3	15.7	15.0	14.5	13.9	13.5	13.0	12.6	12.3	11.9	11.6	11.3	-	-	-	-	320
340	57.3	48.2	41.7	36.8	33.0	30.0	27.5	25.4	23.7	22.2	20.9	19.8	18.8	17.9	17.1	16.3	15.7	15.1	14.6	14.1	13.6	13.2	12.8	12.4	12.1	11.8	-	-	-	-	340
360	59.6	50.1	43.4	38.3	34.4	31.2	28.6	26.5	24.7	23.1	21.8	20.6	19.5	18.6	17.8	17.0	16.4	15.8	15.2	14.7	14.2	13.8	13.4	13.0	12.6	12.3	-	-	-	-	360
380	61.9	52.1	45.1	39.8	35.7	32.5	29.8	27.5	25.7	24.0	22.6	21.4	20.3	19.4	18.5	17.7	17.0	16.4	15.8	15.3	14.8	14.3	13.9	13.5	13.2	12.8	-	-	-	-	380
400	64.2	54.0	46.8	41.3	37.1	33.7	30.9	28.6	26.6	25.0	23.5	22.2	21.1	20.1	19.2	18.4	17.7	17.0	16.4	15.9	15.4	14.9	14.5	14.1	13.7	13.4	-	-	-	-	400
420	66.5	56.0	48.5	42.8	38.4	34.9	32.1	29.7	27.6	25.9	24.4	23.1	21.9	20.9	20.0	19.1	18.4	17.7	17.1	16.5	16.0	15.5	15.0	14.6	14.2	13.8	-	-	-	-	420
440	68.8	57.9	50.2	44.3	39.8	36.2	33.2	30.7	28.6	26.8	25.3	23.9	22.7	21.6	20.7	19.8	19.0	18.3	17.7	17.1	16.6	16.1	15.6	15.2	14.8	14.4	-	-	-	-	440
460	71.1	59.9	51.8	45.8	41.1	37.4	34.3	31.8	29.6	27.8	26.1	24.7	23.5	22.4	21.4	20.5	19.7	19.0	18.3	17.7	17.1	16.6	16.2	15.7	15.3	14.9	-	-	-	-	460
480	73.4	61.8	53.5	47.3	42.5	38.6	35.5	32.8	30.6	28.7	27.0	25.6	24.3	23.2	22.1	21.2	20.4	19.6	18.9	18.3	17.7	17.2	16.7	16.2	15.8	15.4	-	-	-	-	480
500	75.7	63.8	55.2	48.8	43.8	39.9	36.6	33.9	31.6	29.6	27.9	26.4	25.1	23.9	22.9	21.9	21.1	20.3	19.6	18.9	18.3	17.8	17.3	16.8	16.3	15.9	-	-	-	-	500
600	87.3	73.5	63.7	56.3	50.6	46.0	42.3	39.1	36.5	34.2	32.3	30.6	29.0	27.7	26.5	25.4	24.4	23.5	22.7	22.0	21.3	20.6	20.0	19.5	19.0	18.5	-	-	-	-	600
700	98.8	83.3	72.2	63.8	57.4	52.2	48.0	44.4	41.4	38.9	36.6	34.7	33.0	31.5	30.1	28.9	27.8	26.8	25.8	25.0	24.2	23.5	22.8	22.2	21.6	21.1	-	-	-	-	700
800	110.4	93.0	80.6	71.4	64.1	58.4	53.6	49.7	46.4	43.5	41.0	38.9	36.9	35.2	33.7	32.4	31.1	30.0	29.0	28.0	27.2	26.4	25.6	24.9	24.3	23.7	-	-	-	-	800
900	121.9	102.8	89.1	78.9	70.9	64.5	59.3	55.0	51.3	48.1	45.4	43.0	40.9	39.0	37.3	35.8	34.5	33.2	32.1	31.1	30.1	29.2	28.4	27.6	26.9	26.3	-	-	-	-	900
1000	133.4	112.5	97.6	86.4	77.7	70.7	65.0	60.2	56.2	52.8	49.8	47.2	44.9	42.8	41.0	39.3	37.8	36.5	35.2	34.1	33.0	32.1	31.2	30.4	29.6	28.9	-	-	-	-	1000
1100	145.0	122.3	106.0	93.9	84.4	76.9	70.7	65.5	61.1	57.4	54.2	51.3	48.8	46.6	44.6	42.8	41.2	39.7	38.4	37.1	36.0	34.9	34.0	33.1	32.2	31.4	-	-	-	-	1100
1200	156.5	132.0	114.5	101.4	91.2	83.0	76.3	70.8	66.1	62.0	58.5	55.5	52.8	50.4	48.2	46.3	44.5	42.9	41.5	40.2	38.9	37.8	36.8	35.8	34.9	34.0	-	-	-	-	1200
1300	168.0	141.8	123.0	108.9	97.9	89.2	82.0	76.0	71.0	66.7	62.9	59.6	56.7	54.1	51.8	49.8	47.9	46.2	44.6	43.2	41.9	40.7	39.5	38.5	37.5	36.6	-	-	-	-	1300
1400	179.6	151.5	131.5	116.4	104.7	95.4	87.7	81.3	75.9	71.3	67.3	63.8	60.7	57.9	55.5	53.2	51.2	49.4	47.7	46.2	44.8	43.5	42.3	41.2	40.2	39.2	-	-	-	-	1400
1500	191.1	161.3	139.9	123.9	111.5	101.5	93.4	86.6	80.8	75.9	71.7	67.9	64.6	61.7	59.1	56.7	54.6	52.7	50.9	49.3	47.8	46.4	45.1	43.9	42.8	41.8	-	-	-	-	1500
Term. 2/	18.046	15.038	12.890	11.279	10.026	9.023	8.203	7.519	6.941	6.445	6.015	5.639	5.308	5.013	4.749	4.512	4.297	4.101	3.923	3.760	3.609	3.470	3.342	3.223	3.111	3.008	-	-	-	-	Term. 2/
L. H. 3/	.115380	.097475	.084686	.075094	.067633	.061665	.056782	.052713	.049269	.046318	.043750	.041522	.039547	.037792	.036221	.034808	.033529	.032366	.031304	.030331	.029436	.028610	.027844	.027134	.026472	.025855	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 21.0 tons and a ratio of empty car miles to loaded car miles of 0.332. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.20.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.29.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85-herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 48.—TERRITORY NO. 7 - SOUTHWESTERN, including Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	16.6	13.8	11.8	10.3	9.2	8.3	7.5	6.9	6.4	5.9	5.6	5.3	4.9	4.6	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.2	3.1	3.0	2.9	2.8	-	-	-	-	10
20	19.9	14.9	12.8	11.2	10.0	9.0	8.2	7.5	7.0	6.5	6.1	5.7	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3	3.2	3.1	-	-	-	-	20
30	21.3	16.1	13.8	12.1	10.8	9.8	8.9	8.2	7.6	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.8	3.6	3.5	3.4	-	-	-	-	30
40	22.7	17.3	14.8	13.0	11.6	10.5	9.6	8.8	8.1	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.2	4.9	4.7	4.6	4.4	4.2	4.1	4.0	3.8	3.7	-	-	-	-	40
50	23.8	18.4	15.9	14.0	12.4	11.2	10.2	9.4	8.7	8.1	7.6	7.2	6.8	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	-	-	-	-	50
60	24.4	19.2	16.9	14.8	13.2	12.0	10.9	10.0	9.3	8.7	8.1	7.7	7.2	6.9	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	-	-	-	-	60
70	24.8	20.8	17.9	15.7	14.0	12.7	11.6	10.7	9.9	9.2	8.6	8.1	7.7	7.3	6.9	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	-	-	-	-	70
80	25.2	21.4	18.9	16.6	14.8	13.4	12.3	11.3	10.5	9.8	9.2	8.6	8.2	7.7	7.4	7.0	6.7	6.4	6.2	6.0	5.7	5.6	5.4	5.2	5.0	4.9	-	-	-	-	80
90	25.6	21.9	19.3	17.2	15.6	14.2	12.9	11.9	11.1	10.3	9.7	9.1	8.6	8.2	7.8	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.2	-	-	-	-	90
100	26.0	24.3	20.2	18.4	16.5	14.9	13.6	12.5	11.6	10.9	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.7	5.5	-	-	-	-	100
120	31.7	26.6	22.9	20.2	18.1	16.4	15.0	13.8	12.8	12.0	11.2	10.6	10.0	9.5	9.1	8.7	8.3	8.0	7.6	7.4	7.1	6.9	6.7	6.5	6.3	6.1	-	-	-	-	120
140	36.5	30.0	26.0	22.0	19.7	17.8	16.3	15.0	14.0	13.0	12.2	11.6	10.9	10.4	9.9	9.5	9.2	8.7	8.4	8.1	7.8	7.5	7.3	7.1	6.9	6.7	-	-	-	-	140
160	37.3	31.3	27.0	23.8	21.3	19.3	17.6	16.3	15.1	14.1	13.3	12.5	11.9	11.3	10.7	10.3	9.8	9.5	9.1	8.8	8.5	8.2	7.9	7.7	7.5	7.3	-	-	-	-	160
180	40.1	33.6	29.0	25.6	22.9	20.7	19.0	17.5	16.3	15.2	14.2	13.5	12.8	12.2	11.6	11.1	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.3	8.1	7.8	-	-	-	-	180
200	42.8	36.0	31.0	27.4	24.5	22.2	20.3	18.8	17.5	16.3	15.3	14.5	13.7	13.0	12.4	11.9	11.4	11.0	10.6	10.2	9.8	9.5	9.2	9.0	8.7	8.5	-	-	-	-	200
220	45.6	38.3	33.1	29.2	26.1	23.7	21.7	20.0	18.6	17.4	16.4	15.5	14.6	13.9	13.3	12.7	12.2	11.7	11.3	10.9	10.5	10.2	9.9	9.6	9.3	9.1	-	-	-	-	220
240	48.4	40.6	35.1	30.9	27.7	25.1	23.0	21.3	19.8	18.5	17.4	16.4	15.6	14.8	14.1	13.5	13.0	12.5	12.0	11.6	11.2	10.8	10.5	10.2	9.9	9.7	-	-	-	-	240
260	51.1	43.0	37.1	32.7	29.3	26.6	24.4	22.6	20.9	19.6	18.4	17.4	16.5	15.7	15.0	14.3	13.8	13.2	12.7	12.3	11.9	11.5	11.2	10.8	10.5	10.2	-	-	-	-	260
280	53.9	45.3	39.1	34.5	30.9	28.1	25.7	23.8	22.1	20.7	19.5	18.4	17.4	16.6	15.8	15.1	14.5	14.0	13.5	13.0	12.6	12.2	11.8	11.5	11.1	10.8	-	-	-	-	280
300	56.7	47.6	41.2	36.3	32.6	29.5	27.1	25.0	23.3	21.8	20.5	19.4	18.4	17.5	16.7	16.0	15.3	14.7	14.2	13.7	13.2	12.8	12.4	12.1	11.7	11.4	-	-	-	-	300
320	59.5	50.0	43.2	38.1	34.2	31.0	28.4	26.2	24.4	22.9	21.5	20.3	19.3	18.4	17.5	16.8	16.1	15.5	14.9	14.4	13.9	13.5	13.1	12.7	12.4	12.0	-	-	-	-	320
340	62.2	52.3	45.2	39.9	35.8	32.5	29.8	27.5	25.6	24.0	22.5	21.3	20.2	19.2	18.4	17.6	16.9	16.2	15.6	15.1	14.6	14.2	13.7	13.3	13.0	12.6	-	-	-	-	340
360	65.0	54.6	47.2	41.7	37.4	33.9	31.1	28.8	26.8	25.1	23.6	22.3	21.1	20.1	19.2	18.4	17.7	17.0	16.4	15.8	15.3	14.8	14.4	14.0	13.6	13.2	-	-	-	-	360
380	67.8	57.0	49.3	43.5	39.0	35.4	32.5	30.0	27.9	26.1	24.6	23.3	22.1	21.0	20.1	19.2	18.4	17.7	17.1	16.5	16.0	15.5	15.0	14.6	14.2	13.8	-	-	-	-	380
400	70.5	59.3	51.3	45.3	40.6	36.9	33.8	31.2	29.1	27.2	25.6	24.2	23.0	21.9	20.9	20.0	19.2	18.5	17.8	17.2	16.7	16.1	15.7	15.2	14.8	14.4	-	-	-	-	400
420	73.3	61.7	53.3	47.1	42.2	38.3	35.1	32.5	30.3	28.3	26.7	25.2	23.9	22.8	21.8	20.8	20.0	19.2	18.6	17.9	17.3	16.8	16.3	15.8	15.4	15.0	-	-	-	-	420
440	76.1	64.0	55.3	48.8	43.8	39.8	36.5	33.7	31.4	29.4	27.7	26.2	24.8	23.7	22.6	21.6	20.8	20.0	19.3	18.6	18.0	17.5	16.9	16.5	16.0	15.6	-	-	-	-	440
460	78.9	66.3	57.4	50.7	45.4	41.3	37.8	35.0	32.6	30.5	28.7	27.2	25.8	24.5	23.4	22.5	21.6	20.7	20.0	19.3	18.7	18.1	17.6	17.1	16.6	16.2	-	-	-	-	460
480	81.6	68.7	59.4	52.4	47.0	42.7	39.2	36.2	33.7	31.6	29.8	28.1	26.7	25.4	24.3	23.3	22.3	21.5	20.7	20.0	19.4	18.8	18.2	17.7	17.2	16.8	-	-	-	-	480
500	84.4	71.0	61.4	54.2	48.7	44.2	40.5	37.5	34.9	32.7	30.8	29.1	27.6	26.3	25.1	24.1	23.1	22.3	21.5	20.7	20.1	19.4	18.9	18.3	17.8	17.4	-	-	-	-	500
600	95.3	80.7	71.5	63.2	56.7	51.5	47.3	43.7	40.7	38.2	35.9	34.0	32.3	30.7	29.4	28.1	27.0	26.0	25.1	24.2	23.5	22.7	22.1	21.5	20.9	20.4	-	-	-	-	600
700	106.1	94.4	81.7	72.2	64.8	58.8	54.0	50.0	46.6	43.6	41.1	38.9	36.9	35.2	33.6	32.2	30.9	29.8	28.7	27.8	26.9	26.1	25.3	24.6	23.9	23.3	-	-	-	-	700
800	116.9	106.0	91.8	81.1	72.8	66.2	60.7	56.2	52.6	49.1	46.2	43.7	41.5	39.6	37.8	36.3	34.8	33.5	32.4	31.3	30.3	29.4	28.5	27.7	27.0	26.3	-	-	-	-	800
900	127.8	117.7	101.9	90.1	80.9	73.5	67.5	62.4	58.2	54.5	51.4	48.6	46.2	44.0	42.1	40.3	38.7	37.3	36.0	34.8	33.7	32.7	31.7	30.8	30.0	29.3	-	-	-	-	900
1000	138.6	129.6	112.0	99.0	88.9	80.8	74.2	68.7	64.0	60.0	56.5	53.5	50.8	48.4	46.3	44.4	42.6	41.1	39.6	38.3	37.1	36.0	34.9	34.0	33.1	32.2	-	-	-	-	1000
1100	149.5	141.1	122.2	108.0	97.0	88.1	80.9	74.9	69.8	65.5	61.7	58.4	55.4	52.9	50.5	48.4	46.5	44.8	43.3	41.8	40.5	39.3	38.1	37.1	36.1	35.2	-	-	-	-	1100
1200	160.3	152.7	132.3	116.9	105.0	95.5	87.7	81.1	75.6	70.9	66.8	63.2	60.1	57.3	54.8	52.5	50.5	48.6	46.9	45.3	43.9	42.6	41.4	40.2	39.2	38.2	-	-	-	-	1200
1300	171.2	164.4	142.4	125.9	113.1	102.8	94.4	87.4	81.5	76.4	72.0	68.1	64.7	61.7	59.0	56.6	54.4	52.4	50.5	48.9	47.3	45.9	44.6	43.4	42.2	41.2	-	-	-	-	1300
1400	182.1	176.1	152.5	134.9	121.1	110.1	101.1	93.6	87.3	82.8	77.1	73.0	69.4	66.1	63.2	60.6	58.3	56.1	54.2	52.4	50.7	49.2	47.8	46.5	45.3	44.1	-	-	-	-	1400
1500	192.9	187.8	162.7	143.8	129.2	117.4	107.8	99.9	93.1	87.3	82.3	77.9	74.0	70.5	67.5	64.7	62.2	59.9	57.8	55.9	54.1	52.5	51.0	49.6	48.3	47.1	-	-	-	-	1500
Term. 2/	15.199	12.662	10.801	9.451	8.401	7.561	6.874	6.301	5.816	5.401	5.041	4.726	4.448	4.201	3.979	3.781	3.600	3.437	3.287	3.150	3.024	2.908	2.800	2.700	2.607	2.520	-	-	-	-	Term. 2/
L. H. 1/	.118556	.116787	.101236	.089575	.080506	.073250	.067314	.062367	.058181	.054593	.051483	.048763	.046362	.044228	.042318	.040600	.039045	.037632	.036341	.035158	.034070	.033065	.032135	.031271	.030467	.029717	-	-	-	-	L. H. 1/

1/ Based on a tare-weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.658. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.20.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.29.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.49.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.62.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

1/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 49.--TERRITORY NO. 7 - SOUTHWESTERN, including Southern Missouri

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	82.9	66.5	58.3	53.4	50.1	47.7	46.0	44.6	43.5	42.6	41.9	41.2	40.7	40.2	39.8	39.5	39.1	38.9	38.6	38.4	38.1	38.0	37.8	37.6	37.5	37.3	37.2	37.1	37.0	10
20	87.8	69.8	60.8	55.4	51.8	49.2	47.3	45.8	44.6	43.6	42.8	42.1	41.5	41.0	40.6	40.2	39.8	39.5	39.2	39.0	38.7	38.5	38.3	38.1	38.0	37.8	37.7	37.5	37.4	20
30	92.7	73.1	63.3	57.5	53.5	50.8	48.7	47.0	45.7	44.7	43.8	43.0	42.4	41.8	41.3	40.9	40.5	40.2	39.9	39.6	39.3	39.1	38.9	38.7	38.5	38.3	38.2	38.0	37.9	30
40	97.6	76.4	65.8	59.5	55.3	52.3	50.0	48.2	46.8	45.7	44.7	43.9	43.2	42.6	42.1	41.6	41.2	40.8	40.5	40.2	39.9	39.7	39.4	39.2	39.0	38.8	38.7	38.5	38.4	40
50	102.4	79.7	68.4	61.5	57.0	53.8	51.3	49.4	47.9	46.7	45.7	44.8	44.0	43.4	42.8	42.3	41.9	41.5	41.1	40.8	40.5	40.2	40.0	39.7	39.5	39.3	39.2	39.0	38.8	50
60	107.3	83.0	70.9	63.6	58.7	55.3	52.7	50.6	49.0	47.7	46.6	45.7	44.9	44.2	43.6	43.0	42.5	42.1	41.7	41.4	41.1	40.8	40.5	40.3	40.1	39.8	39.7	39.5	39.3	60
70	112.2	86.3	73.4	65.6	60.5	56.8	54.0	51.8	50.1	48.7	47.5	46.5	45.7	45.0	44.3	43.7	43.2	42.8	42.4	42.0	41.7	41.4	41.1	40.8	40.6	40.4	40.1	40.0	39.8	70
80	117.0	89.6	75.9	67.7	62.2	58.3	55.3	53.1	51.2	49.7	48.5	47.4	46.5	45.7	45.1	44.4	43.9	43.4	43.0	42.6	42.2	41.9	41.6	41.3	41.1	40.9	40.6	40.4	40.3	80
90	121.9	92.9	78.4	69.7	63.9	59.8	56.7	54.3	52.3	50.7	49.4	48.3	47.4	46.5	45.8	45.2	44.6	44.1	43.6	43.2	42.8	42.5	42.2	41.9	41.6	41.4	41.1	40.9	40.7	90
100	126.8	96.2	80.9	71.8	65.7	61.3	58.0	55.5	53.4	51.8	50.4	49.2	48.2	47.3	46.5	45.9	45.3	44.7	44.3	43.8	43.4	43.1	42.7	42.4	42.1	41.9	41.6	41.4	41.2	100
120	136.5	102.8	86.0	75.9	69.1	64.3	60.7	57.9	55.6	53.8	52.3	51.0	49.8	48.9	48.0	47.3	46.6	46.0	45.5	45.0	44.6	44.2	43.8	43.5	43.2	42.9	42.6	42.4	42.1	120
140	146.3	109.4	91.0	79.9	72.6	67.3	63.4	60.3	57.8	55.8	54.1	52.7	51.5	50.5	49.5	48.7	48.0	47.3	46.8	46.2	45.8	45.3	44.9	44.6	44.2	43.9	43.6	43.3	43.1	140
160	156.0	116.0	96.0	84.0	76.0	70.3	66.0	62.7	60.0	57.8	56.0	54.5	53.2	52.0	51.0	50.1	49.4	48.7	48.0	47.5	46.9	46.5	46.0	45.6	45.3	44.9	44.6	44.3	44.0	160
180	165.8	122.6	101.1	88.1	79.5	73.3	68.7	65.1	62.2	59.9	57.9	56.3	54.8	53.6	52.5	51.6	50.7	50.0	49.3	48.7	48.1	47.6	47.1	46.7	46.3	45.9	45.6	45.3	45.0	180
200	175.5	129.2	106.1	92.2	82.9	76.3	71.4	67.5	64.4	61.9	59.8	58.0	56.5	55.2	54.0	53.0	52.1	51.3	50.5	49.9	49.3	48.7	48.2	47.8	47.3	46.9	46.6	46.2	45.9	200
220	185.3	135.8	111.1	96.3	86.4	79.3	74.0	69.9	66.6	63.9	61.7	59.8	58.2	56.7	55.5	54.4	53.4	52.6	51.8	51.1	50.4	49.9	49.3	48.8	48.4	48.0	47.6	47.2	46.9	220
240	195.0	142.4	116.2	100.4	89.9	82.4	76.7	72.3	68.8	66.0	63.6	61.5	59.8	58.3	57.0	55.8	54.8	53.9	53.1	52.3	51.6	51.0	50.4	49.9	49.4	49.0	48.5	48.2	47.8	240
260	204.8	149.0	121.2	104.5	93.3	85.4	79.4	74.7	71.0	68.0	65.5	63.3	61.5	59.9	58.5	57.3	56.2	55.2	54.3	53.5	52.8	52.1	51.5	51.0	50.4	50.0	49.5	49.1	48.7	260
280	214.5	155.7	126.2	108.6	96.8	88.4	82.1	77.2	73.2	70.0	67.3	65.1	63.1	61.5	60.0	58.7	57.5	56.5	55.6	54.7	54.0	53.3	52.6	52.0	51.5	51.0	50.5	50.1	49.7	280
300	224.3	162.3	131.2	112.6	100.2	91.4	84.7	79.6	75.4	72.0	69.2	66.8	64.8	63.0	61.5	60.1	58.9	57.8	56.8	55.9	55.1	54.4	53.7	53.1	52.5	52.0	51.5	51.0	50.6	300
320	234.0	168.9	136.3	116.7	103.7	94.4	87.4	82.0	77.6	74.1	71.1	68.6	66.5	64.6	63.0	61.5	60.3	59.1	58.1	57.2	56.3	55.5	54.8	54.2	53.6	53.0	52.5	52.0	51.6	320
340	243.8	175.5	141.3	120.8	107.2	97.4	90.1	84.4	79.8	76.1	73.0	70.4	68.1	66.2	64.5	63.0	61.6	60.4	59.3	58.4	57.5	56.7	55.9	55.2	54.6	54.0	53.5	53.0	52.5	340
360	253.5	182.1	146.3	124.9	110.6	100.4	92.7	86.8	82.0	78.1	74.9	72.1	69.8	67.7	66.0	64.4	63.0	61.7	60.6	59.6	58.6	57.8	57.0	56.3	55.6	55.0	54.5	53.9	53.5	360
380	263.3	188.7	151.4	129.0	114.1	103.4	95.4	89.2	84.2	80.2	76.8	73.9	71.4	69.3	67.5	65.8	64.3	63.0	61.9	60.8	59.8	58.9	58.1	57.4	56.7	56.1	55.5	54.9	54.4	380
400	273.0	195.3	156.4	133.1	117.5	106.4	98.1	91.6	86.4	82.2	78.7	75.7	73.1	70.9	68.9	67.2	65.7	64.3	63.1	62.0	61.0	60.1	59.2	58.4	57.7	57.1	56.4	55.9	55.3	400
420	282.7	201.9	161.4	137.2	121.0	109.4	100.8	94.0	88.6	84.2	80.5	77.4	74.8	72.5	70.4	68.6	67.1	65.6	64.4	63.2	62.2	61.2	60.3	59.5	58.8	58.1	57.4	56.8	56.3	420
440	292.5	208.5	166.5	141.3	124.4	112.4	103.4	96.4	90.8	86.3	82.4	79.2	76.4	74.0	71.9	70.1	68.4	67.0	65.6	64.4	63.3	62.3	61.4	60.6	59.8	59.1	58.4	57.8	57.2	440
460	302.2	215.1	171.5	145.3	127.9	115.5	106.1	98.8	93.0	88.3	84.3	81.0	78.1	75.6	73.4	71.5	69.8	68.3	66.9	65.6	64.5	63.5	62.5	61.7	60.8	60.1	59.4	58.8	58.2	460
480	312.0	221.7	176.5	149.4	131.4	118.5	108.8	101.3	95.2	90.3	86.2	82.7	79.8	77.2	74.9	72.9	71.2	69.6	68.1	66.9	65.7	64.6	63.6	62.7	61.9	61.1	60.4	59.7	59.1	480
500	321.7	228.3	181.6	153.5	134.8	121.5	111.5	103.7	97.4	92.3	88.1	84.5	81.4	78.7	76.4	74.3	72.5	70.9	69.4	68.1	66.9	65.7	64.7	63.8	62.9	62.1	61.4	60.7	60.1	500
600	370.5	261.3	206.7	174.0	152.1	136.5	124.8	115.7	108.4	102.5	97.5	93.3	89.7	86.6	83.9	81.5	79.3	77.4	75.7	74.1	72.7	71.4	70.2	69.1	68.1	67.2	66.3	65.5	64.8	600
700	419.2	294.3	231.9	194.4	169.4	151.6	138.2	127.8	119.4	112.6	107.0	102.2	98.0	94.5	91.3	88.6	86.1	83.9	82.0	80.2	78.6	77.1	75.7	74.5	73.3	72.3	71.3	70.3	69.5	700
800	467.9	327.3	257.0	214.8	186.7	166.6	151.5	139.8	130.4	122.8	116.4	111.0	106.3	102.3	98.8	95.7	92.9	90.5	88.3	86.3	84.4	82.8	81.2	79.8	78.5	77.3	76.2	75.2	74.2	800
900	516.7	360.3	282.2	235.3	204.0	181.7	164.9	151.9	141.4	132.9	125.8	119.8	114.6	110.2	106.3	102.8	99.8	97.0	94.5	92.3	90.3	88.4	86.7	85.2	83.7	82.4	81.1	80.0	78.9	900
1000	565.4	393.4	307.3	255.7	221.3	196.7	178.3	163.9	152.5	143.1	135.2	128.6	123.0	118.0	113.7	109.9	106.6	103.6	100.8	98.4	96.1	94.1	92.2	90.5	88.9	87.5	86.1	84.8	83.6	1000
1100	614.1	426.4	332.5	276.1	238.6	211.7	191.6	176.0	163.5	153.2	144.7	137.5	131.3	125.9	121.2	117.1	113.4	110.1	107.1	104.4	102.0	99.8	97.7	95.8	94.1	92.5	91.0	89.6	88.3	1100
1200	662.9	459.4	357.6	296.6	255.9	226.8	205.0	188.0	174.5	163.4	154.1	146.3	139.6	133.8	128.7	124.2	120.2	116.6	113.4	110.5	107.9	105.4	103.2	101.2	99.3	97.6	96.0	94.5	93.0	1200
1300	711.6	492.4	382.8	317.0	273.2	241.8	218.3	200.1	185.5	173.5	163.5	155.1	147.9	141.6	136.1	131.3	127.0	123.2	119.7	116.6	113.7	111.1	108.7	106.5	104.5	102.6	100.9	99.3	97.8	1300
1400	760.4	525.4	407.9	337.4	290.4	256.9	231.7	212.1	196.5	183.7	173.0	163.9	156.2	149.5	143.6	138.4	133.8	129.7	126.0	122.6	119.6	116.8	114.2	111.9	109.7	107.8	105.8	104.1	102.5	1400
1500	809.1	558.4	433.1	357.9	307.7	271.9	245.1	224.2	207.5	193.8	182.4	172.8	164.5	157.3	151.1	145.5	140.6	136.2	132.3	128.7	125.4	122.5	119.7	117.2	114.9	112.8	110.8	108.9	107.2	1500
Term. 2/	78.060	63.210	55.785	51.330	48.360	46.240	44.650	43.410	42.420	41.610	40.935	40.365	39.875	39.450	39.080	38.750	38.460	38.200	37.965	37.755	37.560	37.385	37.225	37.075	36.935	36.810	36.690	36.580	36.480	Term. 2/
L. H. 3/	.48735	.33015	.25153	.20437	.17292	.15046	.13361	.12052	.11003	.10146	.09431	.08827	.08308	.07859	.07466	.07119	.06811	.06535	.06287	.06062	.05858	.05672	.05500	.05343	.05198	.05064	.04939	.04823	.04714	L. H. 3/

1/ Based on a tare weight of 22.9 tons and a ratio of empty car miles to loaded car miles of 0.378. The Less-carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.20.

For Cost Level III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.29.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 8 - Western Trunk Line, excl. No. Ill. & Sou. Mo.

BOX CARS

TABLE 50.—TERRITORY NO. 8 - WESTERN TRUNK LINE, excluding Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	19.8	16.5	14.2	12.4	11.0	9.9	9.0	8.3	7.7	7.1	6.7	6.2	5.9	5.6	5.3	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	10
20	20.7	17.3	14.8	13.0	11.6	10.4	9.5	8.7	8.1	7.5	7.0	6.6	6.2	5.9	5.6	5.3	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2	20
30	21.6	18.0	15.5	13.6	12.1	10.9	9.9	9.1	8.4	7.9	7.4	6.9	6.5	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	3.4	30
40	22.5	18.8	16.1	14.2	12.6	11.4	10.4	9.5	8.8	8.2	7.7	7.2	6.8	6.5	6.1	5.9	5.6	5.4	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	40
50	23.4	19.5	16.8	14.7	13.2	11.9	10.8	10.0	9.2	8.6	8.1	7.6	7.2	6.8	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	50
60	24.2	20.3	17.5	15.3	13.7	12.4	11.3	10.4	9.6	9.0	8.4	7.9	7.5	7.1	6.7	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	4.1	4.0	60
70	25.1	21.0	18.1	15.9	14.2	12.8	11.7	10.8	10.0	9.3	8.8	8.2	7.8	7.4	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.7	4.5	4.4	4.3	4.2	70
80	26.0	21.8	18.8	16.5	14.7	13.3	12.2	11.2	10.4	9.7	9.1	8.6	8.1	7.7	7.3	7.0	6.7	6.4	6.2	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.7	4.6	4.5	4.4	80
90	26.9	22.5	19.4	17.1	15.3	13.8	12.6	11.6	10.8	10.1	9.5	8.9	8.4	8.0	7.6	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.7	4.6	90
100	27.8	23.3	20.1	17.7	15.8	14.3	13.1	12.1	11.2	10.4	9.8	9.2	8.7	8.3	7.9	7.6	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.0	4.9	4.8	100
120	29.6	24.8	21.4	18.8	16.9	15.3	14.0	12.9	12.0	11.2	10.5	9.9	9.4	8.9	8.5	8.1	7.8	7.5	7.2	6.9	6.7	6.5	6.3	6.1	5.9	5.7	5.6	5.4	5.3	5.2	120
140	31.4	26.3	22.7	20.0	17.9	16.2	14.9	13.7	12.8	11.9	11.2	10.6	10.0	9.5	9.1	8.7	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.2	6.0	5.8	5.7	5.6	140
160	33.1	27.8	24.0	21.2	19.0	17.2	15.8	14.6	13.5	12.7	11.9	11.2	10.6	10.1	9.7	9.2	8.9	8.5	8.2	7.9	7.7	7.4	7.2	7.0	6.8	6.6	6.4	6.3	6.1	6.0	160
180	34.9	29.3	25.4	22.4	20.0	18.2	16.7	15.4	14.3	13.4	12.6	11.9	11.3	10.7	10.2	9.8	9.4	9.0	8.7	8.4	8.1	7.9	7.6	7.4	7.2	7.0	6.8	6.7	6.5	6.4	180
200	36.7	30.8	26.7	23.5	21.1	19.1	17.6	16.2	15.1	14.1	13.3	12.6	11.9	11.3	10.8	10.4	10.0	9.6	9.2	8.9	8.6	8.3	8.1	7.9	7.7	7.4	7.3	7.1	6.9	6.8	200
220	38.5	32.4	28.0	24.7	22.2	20.1	18.4	17.1	15.9	14.9	14.0	13.2	12.6	12.0	11.4	10.9	10.5	10.1	9.7	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.3	7.2	220
240	40.3	33.9	29.3	25.9	23.2	21.1	19.3	17.9	16.7	15.6	14.7	13.9	13.2	12.6	12.0	11.5	11.0	10.6	10.3	9.9	9.6	9.3	9.0	8.8	8.5	8.3	8.1	7.9	7.7	7.6	240
260	42.0	35.4	30.6	27.0	24.3	22.1	20.2	18.7	17.4	16.3	15.4	14.6	13.8	13.2	12.6	12.1	11.6	11.2	10.8	10.4	10.1	9.8	9.5	9.2	9.0	8.7	8.5	8.3	8.1	8.0	260
280	43.8	36.9	31.9	28.2	25.3	23.0	21.1	19.6	18.2	17.1	16.1	15.2	14.5	13.8	13.2	12.6	12.1	11.7	11.3	10.9	10.6	10.2	9.9	9.7	9.4	9.2	8.9	8.7	8.5	8.4	280
300	45.6	38.4	33.2	29.4	26.4	24.0	22.0	20.4	19.0	17.8	16.8	15.9	15.1	14.4	13.8	13.2	12.7	12.2	11.8	11.4	11.0	10.7	10.4	10.1	9.8	9.6	9.4	9.1	8.9	8.8	300
320	47.4	39.9	34.6	30.6	27.5	25.0	22.9	21.2	19.8	18.6	17.5	16.6	15.7	15.0	14.4	13.8	13.2	12.7	12.3	11.9	11.5	11.2	10.9	10.6	10.3	10.0	9.8	9.6	9.3	9.1	320
340	49.1	41.4	35.9	31.7	28.5	25.9	23.8	22.1	20.6	19.3	18.2	17.2	16.4	15.6	14.9	14.3	13.8	13.3	12.8	12.4	12.0	11.6	11.3	11.0	10.7	10.5	10.2	10.0	9.8	9.5	340
360	50.9	42.9	37.2	32.9	29.6	26.9	24.7	22.9	21.4	20.0	18.9	17.9	17.0	16.2	15.5	14.9	14.3	13.8	13.3	12.9	12.5	12.1	11.8	11.5	11.2	10.9	10.6	10.4	10.2	9.9	360
380	52.7	44.4	38.5	34.1	30.6	27.9	25.6	23.7	22.1	20.8	19.6	18.6	17.6	16.8	16.1	15.5	14.9	14.3	13.8	13.4	13.0	12.6	12.2	11.9	11.6	11.3	11.0	10.8	10.6	10.3	380
400	54.5	45.9	39.8	35.3	31.7	28.8	26.5	24.6	22.9	21.5	20.3	19.2	18.3	17.4	16.7	16.0	15.4	14.9	14.3	13.9	13.5	13.1	12.7	12.4	12.0	11.7	11.5	11.2	11.0	10.7	400
420	56.3	47.4	41.1	36.4	32.7	29.8	27.4	25.4	23.7	22.3	21.0	19.9	18.9	18.1	17.3	16.6	16.0	15.4	14.9	14.4	13.9	13.5	13.2	12.8	12.5	12.2	11.9	11.6	11.4	11.1	420
440	58.0	49.0	42.5	37.6	33.8	30.8	28.3	26.2	24.5	23.0	21.7	20.6	19.6	18.7	17.9	17.2	16.5	15.9	15.4	14.9	14.4	14.0	13.6	13.3	12.9	12.6	12.3	12.0	11.8	11.5	440
460	59.8	50.5	43.8	38.8	34.9	31.7	29.2	27.1	25.3	23.7	22.4	21.2	20.2	19.3	18.5	17.7	17.0	16.4	15.9	15.4	14.9	14.5	14.1	13.7	13.4	13.0	12.7	12.5	12.2	11.9	460
480	61.6	52.0	45.1	39.9	35.9	32.7	30.1	27.9	26.1	24.5	23.1	21.9	20.8	19.9	19.0	18.3	17.6	17.0	16.4	15.9	15.4	14.9	14.5	14.2	13.8	13.5	13.2	12.9	12.6	12.3	480
500	63.4	53.5	46.4	41.1	37.0	33.7	31.0	28.7	26.8	25.2	23.8	22.6	21.5	20.5	19.6	18.8	18.1	17.5	16.9	16.4	15.9	15.4	15.0	14.6	14.2	13.9	13.6	13.3	13.0	12.7	500
600	72.3	61.0	53.0	47.0	42.3	38.5	35.5	32.9	30.8	28.9	27.3	25.9	24.6	23.5	22.6	21.7	20.9	20.1	19.5	18.9	18.3	17.8	17.3	16.8	16.4	16.0	15.7	15.3	15.0	14.7	600
700	81.2	68.6	59.6	52.8	47.6	43.4	39.9	37.1	34.7	32.6	30.8	29.2	27.8	26.6	25.5	24.5	23.6	22.8	22.0	21.3	20.7	20.1	19.6	19.1	18.6	18.2	17.8	17.4	17.0	16.7	700
800	90.1	76.1	66.2	58.7	52.9	48.2	44.4	41.3	38.6	36.3	34.3	32.5	31.0	29.6	28.4	27.3	26.3	25.4	24.6	23.8	23.1	22.5	21.9	21.3	20.8	20.3	19.9	19.5	19.1	18.7	800
900	99.0	83.7	72.7	64.5	58.2	53.1	48.9	45.4	42.5	40.0	37.8	35.9	34.2	32.7	31.3	30.1	29.0	28.1	27.1	26.3	25.6	24.8	24.2	23.6	23.0	22.5	22.0	21.5	21.1	20.7	900
1000	107.8	91.2	79.3	70.4	63.5	57.9	53.4	49.6	46.4	43.7	41.3	39.2	37.4	35.7	34.3	33.0	31.8	30.7	29.7	28.8	28.0	27.2	26.5	25.8	25.2	24.6	24.1	23.6	23.1	22.7	1000
1100	116.7	98.8	85.9	76.3	68.8	62.8	57.9	53.8	50.3	47.3	44.8	42.5	40.5	38.8	37.2	35.8	34.5	33.3	32.3	31.3	30.4	29.6	28.8	28.1	27.4	26.8	26.2	25.7	25.2	24.7	1100
1200	125.6	106.3	92.5	82.1	74.1	67.6	62.3	57.9	54.2	51.0	48.3	45.9	43.7	41.8	40.1	38.6	37.2	36.0	34.8	33.8	32.8	31.9	31.1	30.3	29.6	28.9	28.3	27.7	27.2	26.7	1200
1300	134.5	113.8	99.1	88.0	79.4	72.5	66.8	62.1	58.1	54.7	51.8	49.2	46.9	44.9	43.1	41.4	40.0	38.6	37.4	36.3	35.2	34.3	33.4	32.6	31.8	31.1	30.4	29.8	29.2	28.7	1300
1400	143.4	121.4	105.6	93.8	84.7	77.3	71.3	66.3	62.1	58.4	55.3	52.5	50.1	47.9	46.0	44.3	42.7	41.3	39.9	38.7	37.6	36.6	35.7	34.8	34.0	33.2	32.5	31.9	31.2	30.6	1400
1500	152.3	128.9	112.2	99.7	90.0	82.2	75.8	70.5	66.0	62.1	58.8	55.8	53.3	51.0	48.9	47.1	45.4	43.9	42.5	41.2	40.1	39.0	38.0	37.1	36.2	35.4	34.6	33.9	33.3	32.6	1500
Term. 2/	18.906	15.755	13.504	11.816	10.503	9.453	8.594	7.878	7.272	6.752	6.302	5.908	5.561	5.252	4.975	4.727	4.501	4.297	4.110	3.939	3.781	3.636	3.501	3.376	3.260	3.151	3.049	2.954	2.865	2.780	Term. 2/
L. H. 3/	.088940	.075450	.065814	.058388	.052967	.048470	.044791	.041725	.039131	.036907	.034980	.033294	.031806	.030483	.029300	.028235	.027271	.026395	.025596	.024863	.024188	.023565	.022989	.022454	.021955	.021490	.021055	.020647	.020264	.019903	L. H. 3/

1/ Based on a tare weight of 22.0 tons and a ratio of empty car miles to loaded car miles of 0.341. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.57.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.72.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 50 (Concluded).—TERRITORY NO. 8 - WESTERN TRUNK LINE, excluding Northern Illinois and Southern Missouri

Territory No. 8 - Western Trunk Line, excl. No. Ill. & Sou. Mo.

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.8	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	10
20	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	20
30	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	30
40	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	40
50	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	50
60	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	60
70	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	[illegible]	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	70
80	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	[illegible]	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	80
90	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	[illegible]	3.2	3.1	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	90
100	4.7	4.6	4.4	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	100
120	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	120
140	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	140
160	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.8	160
180	6.2	6.1	6.0	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.1	180
200	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	200
220	7.0	6.9	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	220
240	7.4	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	5.0	4.9	240
260	7.8	7.6	7.5	7.3	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	5.4	5.4	5.3	5.3	5.2	260
280	8.2	8.0	7.9	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	280
300	8.6	8.4	8.2	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.8	300
320	9.0	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.4	6.3	6.2	6.2	6.1	6.1	320
340	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	6.3	340
360	9.7	9.6	9.4	9.2	9.0	8.9	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	7.0	6.9	6.8	6.8	6.7	6.6	360
380	10.1	9.9	9.8	9.6	9.4	9.2	9.1	9.0	8.8	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	7.0	6.9	380
400	10.5	10.3	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.3	7.2	400
420	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.5	8.4	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.6	7.5	420
440	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.0	7.9	7.8	7.8	440
460	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	8.1	460
480	12.1	11.9	11.6	11.4	11.2	11.1	10.9	10.7	10.6	10.4	10.3	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.7	8.6	8.5	8.4	8.4	480
500	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.7	10.6	10.5	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	8.8	8.7	8.6	500
600	14.4	14.2	13.9	13.7	13.5	13.2	13.0	12.8	12.6	12.5	12.3	12.1	12.0	11.8	11.7	11.5	11.4	11.3	11.2	11.0	10.9	10.8	10.7	10.6	10.5	10.4	10.3	10.2	10.2	10.1	600
700	16.4	16.1	15.8	15.5	15.3	15.0	14.8	14.6	14.4	14.2	14.0	13.8	13.6	13.5	13.3	13.2	13.0	12.9	12.7	12.6	12.5	12.3	12.2	12.1	12.0	11.9	11.8	11.7	11.6	11.5	700
800	18.4	18.0	17.7	17.4	17.1	16.9	16.6	16.4	16.1	15.9	15.7	15.5	15.3	15.1	14.9	14.8	14.6	14.4	14.3	14.1	14.0	13.9	13.7	13.6	13.5	13.4	13.3	13.1	13.0	12.9	800
900	20.3	19.9	19.6	19.3	19.0	18.7	18.4	18.1	17.9	17.6	17.4	17.2	17.0	16.8	16.6	16.4	16.2	16.0	15.9	15.7	15.5	15.4	15.2	15.1	15.0	14.8	14.7	14.6	14.5	14.4	900
1000	22.3	21.9	21.5	21.1	20.8	20.5	20.2	19.9	19.6	19.3	19.1	18.9	18.6	18.4	18.2	18.0	17.8	17.6	17.4	17.2	17.1	16.9	16.8	16.6	16.5	16.3	16.	16.1	15.9	15.8	1000
1100	24.2	23.8	23.4	23.0	22.6	22.3	22.0	21.7	21.4	21.1	20.8	20.5	20.3	20.0	19.8	19.6	19.4	19.2	19.0	18.8	18.6	18.4	18.3	18.1	17.9	17.8	17.6	17.5	17.4	17.2	1100
1200	26.2	25.7	25.3	24.9	24.5	24.1	23.8	23.4	23.1	22.8	22.5	22.2	21.9	21.7	21.4	21.2	21.0	20.8	20.5	20.3	20.1	20.0	19.8	19.6	19.4	19.3	19.1	19.0	18.8	18.7	1200
1300	28.1	27.6	27.2	26.7	26.3	25.9	25.5	25.2	24.8	24.5	24.2	23.9	23.6	23.3	23.1	22.8	22.6	22.3	22.1	21.9	21.7	21.5	21.3	21.1	20.9	20.7	20.6	20.4	20.3	20.1	1300
1400	30.1	29.6	29.1	28.6	28.2	27.7	27.3	26.9	26.6	26.2	25.9	25.6	25.3	25.0	24.7	24.4	24.2	23.9	23.7	23.4	23.2	23.0	22.8	22.6	22.4	22.2	22.0	21.9	21.7	21.5	1400
1500	32.0	31.5	31.0	30.5	30.0	29.5	29.1	28.7	28.3	27.9	27.6	27.3	26.9	26.6	26.3	26.0	25.8	25.5	25.2	25.0	24.8	24.5	24.3	24.1	23.9	23.7	23.5	23.3	23.1	23.0	1500
Term. 2/	2.701	2.626	2.555	2.488	2.424	2.363	2.306	2.251	2.198	2.148	2.101	2.055	2.011	1.969	1.929	1.891	1.854	1.818	1.784	1.751	1.719	1.688	1.658	1.630	1.602	1.576	1.550	1.525	1.500	1.477	Term. 2/
L. H. 3/	.019563	.019242	.018938	.018650	.018377	.018118	.017871	.017636	.017412	.017198	.016993	.016798	.016611	.016431	.016259	.016094	.015935	.015783	.015636	.015494	.015358	.015227	.015100	.014978	.014859	.014745	.014634	.014527	.014424	.014323	L. H. 3/

1/ Based on a tare weight of 22.0 tons and a ratio of empty car miles to loaded car miles of 0.341. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the Carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.57.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.72.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 8 - Western Trunk Line, excl. No. Ill. & So. Mo.

FLAT CARS

TABLE 51.—TERRITORY NO. 8 - WESTERN TRUNK LINE, excluding Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	19.9	16.6	14.3	12.5	11.1	10.0	9.1	8.4	7.7	7.2	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	10
20	21.0	17.5	15.0	13.2	11.7	10.6	9.6	8.8	8.2	7.6	7.1	6.7	6.3	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	20
30	22.0	18.4	15.8	13.8	12.3	11.1	10.1	9.3	8.6	8.0	7.5	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	30
40	23.0	19.2	16.5	14.5	12.9	11.7	10.6	9.8	9.1	8.4	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.3	5.0	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	3.7	40
50	24.1	20.1	17.3	15.2	13.5	12.2	11.2	10.3	9.5	8.8	8.3	7.8	7.4	7.0	6.6	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9	50
60	25.1	21.0	18.1	15.9	14.1	12.8	11.7	10.7	9.9	9.3	8.7	8.2	7.7	7.3	7.0	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	4.1	60
70	26.1	21.9	18.8	16.5	14.8	13.3	12.2	11.2	10.4	9.7	9.1	8.5	8.1	7.7	7.3	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.4	4.3	70
80	27.1	22.7	19.6	17.2	15.4	13.9	12.7	11.7	10.8	10.1	9.5	8.9	8.4	8.0	7.6	7.3	6.9	6.7	6.4	6.2	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	4.7	4.5	80
90	28.2	23.6	20.3	17.9	16.0	14.4	13.2	12.2	11.3	10.5	9.9	9.3	8.8	8.3	7.9	7.6	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.1	5.0	4.9	4.8	90
100	29.2	24.5	21.1	18.5	16.6	15.0	13.7	12.6	11.7	10.9	10.3	9.7	9.2	8.7	8.3	7.9	7.6	7.3	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	5.0	100
120	31.3	26.2	22.6	19.9	17.8	16.1	14.7	13.6	12.6	11.8	11.1	10.4	9.9	9.4	8.9	8.5	8.2	7.8	7.5	7.3	7.0	6.8	6.6	6.4	6.2	6.0	5.8	5.7	5.6	5.4	120
140	33.3	27.9	24.1	21.2	19.0	17.2	15.8	14.5	13.5	12.6	11.9	11.2	10.6	10.1	9.6	9.2	8.8	8.4	8.1	7.8	7.6	7.3	7.1	6.9	6.7	6.5	6.3	6.1	6.0	5.9	140
160	35.4	29.7	25.6	22.6	20.2	18.3	16.8	15.5	14.4	13.5	12.6	11.9	11.3	10.7	10.3	9.8	9.4	9.0	8.7	8.4	8.1	7.8	7.6	7.4	7.2	7.0	6.8	6.6	6.4	6.3	160
180	37.4	31.4	27.1	23.9	21.4	19.4	17.8	16.4	15.3	14.3	13.4	12.7	12.0	11.4	10.9	10.4	10.0	9.6	9.3	8.9	8.6	8.4	8.1	7.9	7.6	7.4	7.2	7.1	6.9	6.7	180
200	39.5	33.2	28.7	25.3	22.6	20.5	18.8	17.4	16.2	15.1	14.2	13.4	12.7	12.1	11.6	11.1	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.4	8.1	7.9	7.7	7.5	7.3	7.2	200
220	41.5	34.9	30.2	26.6	23.9	21.7	19.8	18.3	17.1	16.0	15.0	14.2	13.5	12.8	12.2	11.7	11.2	10.8	10.4	10.0	9.7	9.4	9.1	8.9	8.6	8.4	8.2	8.0	7.8	7.6	220
240	43.6	36.7	31.7	28.0	25.1	22.8	20.9	19.3	18.0	16.8	15.8	14.9	14.2	13.5	12.9	12.3	11.8	11.4	11.0	10.6	10.3	9.9	9.6	9.4	9.1	8.9	8.6	8.4	8.2	8.0	240
260	45.7	38.4	33.2	29.3	26.3	23.9	21.9	20.2	18.8	17.6	16.6	15.7	14.9	14.2	13.5	13.0	12.5	12.0	11.6	11.2	10.8	10.5	10.1	9.9	9.6	9.3	9.1	8.9	8.7	8.5	260
280	47.7	40.1	34.7	30.7	27.5	25.0	22.9	21.2	19.7	18.5	17.4	16.5	15.6	14.9	14.2	13.6	13.1	12.6	12.1	11.7	11.3	11.0	10.7	10.4	10.1	9.8	9.6	9.3	9.1	8.9	280
300	49.8	41.9	36.2	32.0	28.7	26.1	23.9	22.1	20.6	19.3	18.2	17.2	16.3	15.6	14.9	14.2	13.7	13.2	12.7	12.3	11.9	11.5	11.2	10.9	10.6	10.3	10.0	9.8	9.6	9.4	300
320	51.8	43.6	37.8	33.4	29.9	27.2	25.0	23.1	21.5	20.2	19.0	18.0	17.1	16.2	15.5	14.9	14.3	13.8	13.3	12.8	12.4	12.0	11.7	11.4	11.1	10.8	10.5	10.3	10.0	9.8	320
340	53.9	45.4	39.3	34.7	31.1	28.3	26.0	24.0	22.4	21.0	19.8	18.7	17.8	16.9	16.2	15.5	14.9	14.3	13.8	13.4	13.0	12.6	12.2	11.9	11.5	11.2	11.0	10.7	10.5	10.2	340
360	55.9	47.1	40.8	36.0	32.4	29.4	27.0	25.0	23.3	21.8	20.6	19.5	18.5	17.6	16.8	16.1	15.5	14.9	14.4	13.9	13.5	13.1	12.7	12.4	12.0	11.7	11.4	11.2	10.9	10.7	360
380	58.0	48.8	42.3	37.4	33.6	30.5	28.0	26.0	24.2	22.7	21.4	20.2	19.2	18.3	17.5	16.8	16.1	15.5	15.0	14.5	14.0	13.6	13.2	12.9	12.5	12.2	11.9	11.6	11.4	11.1	380
400	60.1	50.6	43.8	38.7	34.8	31.6	29.0	26.9	25.1	23.5	22.2	21.0	19.9	19.0	18.2	17.4	16.7	16.1	15.6	15.0	14.6	14.1	13.7	13.4	13.0	12.7	12.4	12.1	11.8	11.6	400
420	62.1	52.3	45.3	40.1	36.0	32.7	30.1	27.8	26.0	24.3	22.9	21.7	20.6	19.7	18.8	18.1	17.4	16.7	16.1	15.6	15.1	14.7	14.2	13.9	13.5	13.2	12.8	12.5	12.3	12.0	420
440	64.2	54.1	46.8	41.4	37.2	33.8	31.1	28.8	26.9	25.2	23.7	22.5	21.4	20.4	19.5	18.7	18.0	17.3	16.7	16.2	15.7	15.2	14.8	14.4	14.0	13.6	13.3	13.0	12.7	12.4	440
460	66.2	55.8	48.4	42.8	38.4	35.0	32.1	29.7	27.7	26.0	24.5	23.2	22.1	21.1	20.1	19.3	18.6	17.9	17.3	16.7	16.2	15.7	15.3	14.9	14.5	14.1	13.8	13.5	13.2	12.9	460
480	68.3	57.6	49.9	44.1	39.6	36.1	33.1	30.7	28.6	26.9	25.3	24.0	22.8	21.7	20.8	20.0	19.2	18.5	17.9	17.3	16.7	16.2	15.8	15.3	15.0	14.6	14.2	13.9	13.6	13.3	480
500	70.4	59.3	51.4	45.5	40.9	37.2	34.2	31.6	29.5	27.7	26.1	24.7	23.5	22.4	21.5	20.6	19.8	19.1	18.4	17.8	17.3	16.8	16.3	15.8	15.4	15.1	14.7	14.4	14.1	13.8	500
600	80.6	68.0	59.0	52.2	46.9	42.7	39.3	36.4	34.0	31.9	30.1	28.5	27.1	25.9	24.8	23.8	22.9	22.0	21.3	20.6	20.0	19.4	18.8	18.3	17.9	17.4	17.0	16.7	16.3	16.0	600
700	90.9	76.7	66.5	58.9	53.0	48.3	44.4	41.2	38.4	36.1	34.0	32.3	30.7	29.3	28.1	26.9	25.9	25.0	24.1	23.4	22.7	22.0	21.4	20.8	20.3	19.8	19.4	18.9	18.5	18.1	700
800	101.2	85.4	74.1	65.7	59.1	53.8	49.5	45.9	42.9	40.3	38.0	36.0	34.3	32.7	31.4	30.1	29.0	27.9	27.0	26.2	25.4	24.6	24.0	23.3	22.7	22.2	21.7	21.2	20.8	20.3	800
900	111.5	94.1	81.7	72.4	65.1	59.4	54.6	50.7	47.3	44.5	42.0	39.8	37.9	36.2	34.6	33.3	32.0	30.9	29.9	28.9	28.1	27.3	26.5	25.8	25.2	24.6	24.0	23.5	23.0	22.5	900
1000	121.8	102.8	89.3	79.1	71.2	64.9	59.7	55.4	51.8	48.6	45.9	43.6	41.5	39.6	37.9	36.5	35.1	33.9	32.7	31.7	30.8	29.9	29.1	28.3	27.6	27.0	26.4	25.8	25.2	24.7	1000
1100	132.1	111.5	96.9	85.9	77.3	70.4	64.8	60.2	56.2	52.8	49.9	47.3	45.1	43.0	41.2	39.6	38.2	36.8	35.6	34.5	33.5	32.5	31.6	30.8	30.1	29.4	28.7	28.1	27.5	26.9	1100
1200	142.4	120.2	104.4	92.6	83.4	76.0	70.0	64.9	60.7	57.0	53.9	51.1	48.7	46.5	44.5	42.8	41.2	39.8	38.5	37.3	36.2	35.1	34.2	33.3	32.5	31.7	31.0	30.3	29.7	29.1	1200
1300	152.7	129.0	112.0	99.3	89.4	81.5	75.1	69.7	65.1	61.2	57.8	54.9	52.2	49.9	47.8	46.0	44.3	42.7	41.3	40.0	38.9	37.8	36.7	35.8	34.9	34.1	33.3	32.6	32.0	31.3	1300
1400	163.0	137.7	119.6	106.0	95.5	87.1	80.2	74.4	69.6	65.4	61.8	58.6	55.8	53.4	51.1	49.1	47.3	45.7	44.2	42.8	41.6	40.4	39.3	38.3	37.4	36.5	35.7	34.9	34.2	33.5	1400
1500	173.2	146.4	127.2	112.8	101.6	92.6	85.3	79.2	74.0	69.6	65.7	62.4	59.4	56.8	54.4	52.3	50.4	48.6	47.1	45.6	44.2	43.0	41.9	40.8	39.8	38.9	38.0	37.2	36.4	35.7	1500
Term. 2/	18.906	15.755	13.504	11.816	10.503	9.453	8.594	7.878	7.272	6.752	6.302	5.908	5.561	5.252	4.975	4.727	4.501	4.297	4.110	3.939	3.781	3.636	3.501	3.376	3.260	3.151	3.049	2.954	2.865	2.780	Term. 2/
L. H. 3/	.102890	.087075	.075779	.067306	.060717	.055445	.051132	.047538	.044496	.041889	.039630	.037653	.035909	.034358	.032971	.031723	.030593	.029566	.028628	.027769	.026978	.026248	.025572	.024945	.024360	.023815	.023305	.022827	.022377	.021954	L. H. 3/

1/ Based on a tare weight of 19.1 tons and a ratio of empty car miles to loaded car miles of 0.703. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.57.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.72.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 51 (Concluded).—TERRITORY NO. 8 - WESTERN TRUNK LINE, excluding Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	10
20	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	20
30	3.3	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	30
40	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	40
50	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	50
60	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	60
70	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	70
80	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.8	2.7	2.7	80
90	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.9	90
100	4.9	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.0	100
120	5.3	5.2	5.1	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	120
140	5.7	5.6	5.5	5.4	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	140
160	6.1	6.0	5.9	5.8	5.7	5.5	5.4	5.3	5.2	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	160
180	6.6	6.4	6.3	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.3	180
200	7.0	6.9	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	4.6	200
220	7.4	7.3	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	5.0	5.0	4.9	4.9	220
240	7.9	7.7	7.6	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	240
260	8.3	8.1	8.0	7.8	7.7	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	6.7	5.6	5.5	5.5	260
280	8.7	8.6	8.4	8.2	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.8	280
300	9.2	9.0	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	6.2	6.1	300
320	9.6	9.4	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	320
340	10.0	9.8	9.6	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.8	6.7	340
360	10.5	10.3	10.1	9.9	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.2	7.1	7.0	360
380	10.9	10.7	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	380
400	11.3	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7	7.6	400
420	11.8	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.0	9.9	9.7	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.3	8.2	8.1	8.0	8.0	420
440	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.7	8.6	8.5	8.4	8.3	8.3	440
460	12.6	12.4	12.1	11.9	11.7	11.5	11.3	11.1	11.0	10.8	10.6	10.5	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.6	460
480	13.0	12.8	12.6	12.3	12.1	11.9	11.7	11.5	11.3	11.2	11.0	10.8	10.7	10.6	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	9.0	8.9	480
500	13.5	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.4	9.3	9.2	500
600	15.6	15.3	15.0	14.8	14.5	14.3	14.0	13.8	13.6	13.4	13.2	13.0	12.9	12.7	12.5	12.4	12.2	12.1	12.0	11.8	11.7	11.6	11.5	11.3	11.2	11.1	11.0	10.9	10.8	10.7	600
700	17.8	17.5	17.1	16.8	16.5	16.3	16.0	15.8	15.5	15.3	15.1	14.9	14.7	14.5	14.3	14.1	14.0	13.8	13.7	13.5	13.4	13.2	13.1	13.0	12.8	12.7	12.6	12.5	12.4	12.3	700
800	19.9	19.6	19.2	18.9	18.6	18.3	18.0	17.7	17.4	17.2	16.9	16.7	16.5	16.3	16.1	15.9	15.7	15.5	15.3	15.2	15.0	14.9	14.7	14.6	14.4	14.3	14.2	14.0	13.9	13.8	800
900	22.1	21.7	21.3	20.9	20.6	20.2	19.9	19.6	19.3	19.1	18.8	18.5	18.3	18.1	17.8	17.6	17.4	17.2	17.0	16.9	16.7	16.5	16.3	16.2	16.0	15.9	15.8	15.6	15.5	15.3	900
1000	24.3	23.8	23.4	23.0	22.6	22.2	21.9	21.5	21.2	20.9	20.6	20.4	20.1	19.9	19.6	19.4	19.2	18.9	18.7	18.5	18.3	18.2	18.0	17.8	17.6	17.5	17.3	17.2	17.0	16.9	1000
1100	26.4	25.9	25.5	25.0	24.6	24.2	23.8	23.5	23.1	22.8	22.5	22.2	21.9	21.6	21.4	21.1	20.9	20.7	20.4	20.2	20.0	19.8	19.6	19.4	19.2	19.1	18.9	18.7	18.6	18.4	1100
1200	28.6	28.0	27.5	27.1	26.6	26.2	25.8	25.4	25.0	24.7	24.4	24.0	23.7	23.4	23.1	22.9	22.6	22.4	22.1	21.9	21.7	21.5	21.2	21.0	20.9	20.7	20.5	20.3	20.1	20.0	1200
1300	30.7	30.2	29.6	29.1	28.6	28.2	27.7	27.3	26.9	26.6	26.2	25.9	25.5	25.2	24.9	24.6	24.3	24.1	23.8	23.6	23.3	23.1	22.9	22.7	22.5	22.3	22.1	21.9	21.7	21.5	1300
1400	32.9	32.3	31.7	31.2	30.7	30.2	29.7	29.3	28.8	28.4	28.1	27.7	27.3	27.0	26.7	26.4	26.1	25.8	25.5	25.3	25.0	24.7	24.5	24.3	24.1	23.8	23.6	23.4	23.2	23.1	1400
1500	35.0	34.4	33.8	33.2	32.7	32.2	31.7	31.2	30.7	30.3	29.9	29.5	29.2	28.8	28.5	28.1	27.8	27.5	27.2	26.9	26.7	26.4	26.1	25.9	25.7	25.4	25.2	25.0	24.8	24.6	1500
Term. 2/	2.701	2.626	2.555	2.488	2.424	2.363	2.306	2.251	2.198	2.148	2.101	2.055	2.011	1.969	1.929	1.891	1.854	1.818	1.784	1.751	1.719	1.688	1.658	1.630	1.602	1.576	1.550	1.525	1.500	1.477	Term. 2/
L. H. 3/	.021556	.021179	.020823	.020486	.020165	.019861	.019572	.019296	.019034	.018783	.018543	.018314	.018095	.017884	.017683	.017489	.017303	.017124	.016952	.016786	.016626	.016472	.016324	.016180	.016042	.015908	.015778	.015652	.015531	.015413	L. H. 3/

1/ Based on a tare weight of 19.1 tons and a ratio of empty car miles to loaded car miles of 0.703. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.57.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.72.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in computing the cost scale.

Territory No. 8 - Western Trunk Line, excl. No. Ill. & Sou. Mo.

GONDOLA AND HOPPER CARS

TABLE 52.--TERRITORY NO. 8 - WESTERN TRUNK LINE, excluding Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.1	16.7	14.4	12.6	11.2	10.1	9.2	8.4	7.8	7.2	6.7	6.3	6.0	5.6	5.3	5.1	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	10
20	21.2	17.7	15.2	13.3	11.9	10.7	9.7	8.9	8.3	7.7	7.2	6.7	6.4	6.0	5.7	5.4	5.2	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	3.3	20
30	22.4	18.7	16.0	14.1	12.5	11.3	10.3	9.5	8.8	8.1	7.6	7.2	6.7	6.4	6.1	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.1	3.9	3.8	3.7	3.6	3.5	30
40	23.5	19.7	16.9	14.8	13.2	11.9	10.9	10.0	9.2	8.6	8.1	7.6	7.1	6.8	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.1	3.9	3.8	3.7	40
50	24.7	20.6	17.7	15.6	13.9	12.5	11.4	10.5	9.7	9.1	8.5	8.0	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.1	4.0	50
60	25.8	21.6	18.6	16.3	14.6	13.2	12.0	11.0	10.2	9.5	8.9	8.4	7.9	7.5	7.2	6.8	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	60
70	27.0	22.6	19.4	17.1	15.2	13.8	12.6	11.6	10.7	10.0	9.4	8.8	8.3	7.9	7.5	7.2	6.9	6.6	6.3	6.1	5.8	5.6	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.4	70
80	28.1	23.6	20.3	17.8	15.9	14.4	13.1	12.1	11.2	10.5	9.8	9.2	8.7	8.3	7.9	7.5	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.6	5.4	5.2	5.1	4.9	4.8	4.7	80
90	29.3	24.5	21.1	18.6	16.6	15.0	13.7	12.6	11.7	10.9	10.2	9.7	9.1	8.7	8.2	7.9	7.5	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.1	4.9	90
100	30.5	25.5	22.0	19.3	17.3	15.6	14.3	13.2	12.2	11.4	10.7	10.1	9.5	9.0	8.6	8.2	7.9	7.5	7.2	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.6	5.4	5.3	5.2	100
120	32.8	27.5	23.7	20.8	18.6	16.9	15.4	14.2	13.2	12.3	11.6	10.9	10.3	9.8	9.3	8.9	8.5	8.2	7.9	7.6	7.3	7.1	6.9	6.6	6.4	6.3	6.1	5.9	5.8	5.6	120
140	35.1	29.4	25.4	22.3	20.0	18.1	16.6	15.3	14.2	13.2	12.4	11.7	11.1	10.6	10.1	9.6	9.2	8.8	8.5	8.2	7.9	7.7	7.4	7.2	7.0	6.8	6.6	6.4	6.3	6.1	140
160	37.4	31.4	27.1	23.8	21.3	19.3	17.7	16.3	15.2	14.2	13.3	12.6	11.9	11.3	10.8	10.3	9.9	9.5	9.1	8.8	8.5	8.2	8.0	7.7	7.5	7.3	7.1	6.9	6.8	6.6	160
180	39.7	33.3	28.8	25.4	22.7	20.6	18.8	17.4	16.2	15.1	14.2	13.4	12.7	12.1	11.5	11.0	10.5	10.1	9.8	9.4	9.1	8.8	8.5	8.3	8.0	7.8	7.6	7.4	7.2	7.1	180
200	42.0	35.3	30.5	26.9	24.1	21.8	20.0	18.4	17.1	16.0	15.1	14.2	13.5	12.8	12.2	11.7	11.2	10.8	10.4	10.0	9.7	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	200
220	44.3	37.2	32.2	28.4	25.4	23.0	21.1	19.5	18.1	17.0	15.9	15.1	14.3	13.6	13.0	12.4	11.9	11.4	11.0	10.6	10.3	9.9	9.6	9.4	9.1	8.9	8.6	8.4	8.2	8.0	220
240	46.6	39.2	33.9	29.9	26.8	24.3	22.2	20.6	19.1	17.9	16.8	15.9	15.1	14.3	13.7	13.1	12.6	12.1	11.6	11.2	10.9	10.5	10.2	9.9	9.6	9.4	9.1	8.9	8.7	8.5	240
260	48.9	41.1	35.6	31.4	28.1	25.5	23.4	21.6	20.1	18.8	17.7	16.7	15.9	15.1	14.4	13.8	13.2	12.7	12.3	11.8	11.5	11.1	10.8	10.4	10.2	9.9	9.6	9.4	9.2	9.0	260
280	51.3	43.1	37.2	32.9	29.5	26.7	24.5	22.7	21.1	19.7	18.6	17.6	16.7	15.9	15.1	14.5	13.9	13.4	12.9	12.5	12.0	11.7	11.3	11.0	10.7	10.4	10.1	9.9	9.7	9.4	280
300	53.6	45.0	38.9	34.4	30.8	28.0	25.7	23.7	22.1	20.7	19.5	18.4	17.4	16.6	15.9	15.2	14.6	14.0	13.5	13.1	12.6	12.2	11.9	11.5	11.2	10.9	10.7	10.4	10.2	9.9	300
320	55.9	47.0	40.6	35.9	32.2	29.2	26.8	24.8	23.1	21.6	20.3	19.2	18.2	17.4	16.6	15.9	15.3	14.7	14.2	13.7	13.2	12.8	12.4	12.1	11.8	11.4	11.2	10.9	10.6	10.4	320
340	58.2	48.9	42.3	37.4	33.5	30.5	27.9	25.8	24.1	22.5	21.2	20.1	19.0	18.1	17.3	16.6	15.9	15.3	14.8	14.3	13.8	13.4	13.0	12.6	12.3	12.0	11.7	11.4	11.1	10.9	340
360	60.5	50.9	44.0	38.9	34.9	31.7	29.1	26.9	25.0	23.5	22.1	20.9	19.8	18.9	18.0	17.3	16.6	16.0	15.4	14.9	14.4	14.0	13.5	13.2	12.8	12.5	12.2	11.9	11.6	11.4	360
380	62.8	52.8	45.7	40.4	36.2	32.9	30.2	27.9	26.0	24.4	23.0	21.7	20.6	19.6	18.8	18.0	17.3	16.6	16.0	15.5	15.0	14.5	14.1	13.7	13.3	13.0	12.7	12.4	12.1	11.8	380
400	65.1	54.8	47.4	41.9	37.6	34.2	31.3	29.0	27.0	25.3	23.8	22.5	21.4	20.4	19.5	18.7	17.9	17.3	16.7	16.1	15.6	15.1	14.7	14.3	13.9	13.5	13.2	12.9	12.6	12.3	400
420	67.4	56.8	49.1	43.4	39.0	35.4	32.5	30.1	28.0	26.2	24.7	23.4	22.2	21.2	20.2	19.4	18.6	17.9	17.3	16.7	16.2	15.7	15.2	14.8	14.4	14.0	13.7	13.4	13.1	12.8	420
440	69.7	58.7	50.8	44.9	40.3	36.6	33.6	31.1	29.0	27.2	25.6	24.2	23.0	21.9	20.9	20.1	19.3	18.6	17.9	17.3	16.8	16.3	15.8	15.3	14.9	14.6	14.2	13.9	13.6	13.3	440
460	72.0	60.7	52.5	46.4	41.7	37.9	34.8	32.2	30.0	28.1	26.5	25.0	23.8	22.7	21.7	20.8	20.0	19.2	18.5	17.9	17.4	16.8	16.3	15.9	15.5	15.1	14.7	14.4	14.0	13.7	460
480	74.4	62.6	54.2	47.9	43.0	39.1	35.9	33.2	31.0	29.0	27.3	25.9	24.6	23.4	22.4	21.5	20.6	19.9	19.2	18.5	17.9	17.4	16.9	16.4	16.0	15.6	15.2	14.9	14.5	14.2	480
500	76.7	64.6	55.9	49.4	44.4	40.3	37.0	34.3	32.0	30.0	28.2	26.7	25.4	24.2	23.1	22.2	21.3	20.5	19.8	19.1	18.5	18.0	17.5	17.0	16.5	16.1	15.7	15.4	15.0	14.7	500
600	88.2	74.3	64.4	56.9	51.1	46.5	42.7	39.6	36.9	34.6	32.6	30.9	29.3	28.0	26.8	25.7	24.7	23.8	22.9	22.2	21.5	20.8	20.2	19.7	19.2	18.7	18.3	17.8	17.4	17.1	600
700	99.8	84.1	72.9	64.5	57.9	52.7	48.4	44.8	41.8	39.2	37.0	35.0	33.3	31.8	30.4	29.1	28.0	27.0	26.1	25.2	24.4	23.7	23.0	22.4	21.8	21.3	20.8	20.3	19.9	19.4	700
800	111.3	93.8	81.3	72.0	64.7	58.9	54.1	50.1	46.8	43.9	41.4	39.2	37.3	35.5	34.0	32.6	31.4	30.2	29.2	28.3	27.4	26.6	25.8	25.1	24.5	23.9	23.3	22.8	22.3	21.8	800
900	122.9	103.6	89.8	79.5	71.5	65.0	59.8	55.4	51.7	48.5	45.8	43.4	41.2	39.3	37.6	36.1	34.7	33.5	32.3	31.3	30.3	29.4	28.6	27.9	27.1	26.5	25.9	25.3	24.7	24.2	900
1000	134.4	113.4	98.3	87.0	78.2	71.2	65.5	60.7	56.5	53.2	50.1	47.5	45.2	43.1	41.3	39.6	38.1	36.7	35.5	34.3	33.3	32.3	31.4	30.6	29.8	29.1	28.4	27.8	27.2	26.6	1000
1100	146.0	123.1	106.8	94.5	85.0	77.4	71.2	66.0	61.6	57.8	54.5	51.7	49.1	46.9	44.9	43.1	41.5	40.0	38.6	37.4	36.2	35.2	34.2	33.3	32.5	31.7	30.9	30.2	29.6	29.0	1100
1200	157.5	132.9	115.3	102.1	91.8	83.6	76.9	71.2	66.5	62.4	58.9	55.8	53.1	50.7	48.5	46.6	44.8	43.2	41.8	40.4	39.2	38.1	37.0	36.0	35.1	34.3	33.5	32.7	32.0	31.4	1200
1300	169.1	142.6	123.8	109.6	98.6	89.7	82.5	76.5	71.4	67.1	63.3	60.0	57.1	54.5	52.2	50.1	48.2	46.5	44.9	43.5	42.1	40.9	39.8	38.7	37.8	36.8	36.0	35.2	34.4	33.7	1300
1400	180.6	152.4	132.2	117.1	105.3	95.9	88.2	81.8	76.4	71.7	67.7	64.2	61.0	58.3	55.8	53.6	51.5	49.7	48.0	46.5	45.1	43.8	42.6	41.5	40.4	39.4	38.5	37.7	36.9	36.1	1400
1500	192.2	162.2	140.7	124.6	112.1	102.1	93.9	87.1	81.3	76.4	72.1	68.3	65.0	62.1	59.4	57.1	54.9	53.0	51.2	49.5	48.0	46.7	45.4	44.2	43.1	42.0	41.1	40.2	39.3	38.5	1500
Term. 2/	18.906	15.755	13.504	11.816	10.503	9.453	8.594	7.878	7.272	6.75[illegible]	6.302	5.908	5.561	5.252	4.975	4.727	4.501	4.297	4.110	3.939	3.781	3.636	3.501	3.376	3.260	3.151	3.049	2.954	2.865	2.78[illegible]	Term. 2/
L. H. 3/	.115530	.097608	.084807	.075206	.067739	.061765	.056877	.052804	.049358	.046404	.043843	.041603	.039626	.037869	.036297	.034883	.033602	.032439	.031376	.030402	.029506	.028679	.027913	.027202	.026540	.025922	.025344	.024802	.024292	.023813	L. H. 3/

1/ Based on a tare weight of 21.0 tons and a ratio of empty car miles to loaded car miles of 0.530. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.57.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.72.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 52 (Concluded).—TERRITORY NO. 8 - WESTERN TRUNK LINE, excluding Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.9	2.9	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	10
20	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	20
30	3.4	3.3	3.2	3.2	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	30
40	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	40
50	3.9	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	50
60	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	60
70	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	70
80	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	80
90	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	90
100	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	100
120	5.5	5.4	5.3	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.4	120
140	6.0	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	140
160	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	160
180	6.9	6.8	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	180
200	7.4	7.2	7.1	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	5.0	4.9	4.9	4.8	4.8	200
220	7.8	7.7	7.5	7.4	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	220
240	8.3	8.1	8.0	7.8	7.7	7.5	7.4	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	5.4	240
260	8.8	8.6	8.4	8.2	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.7	260
280	9.2	9.0	8.9	8.7	8.5	8.4	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.3	6.2	6.1	6.1	280
300	9.7	9.5	9.3	9.1	9.0	8.8	8.6	8.5	8.3	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	300
320	10.2	10.0	9.8	9.6	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	6.9	6.9	6.8	6.7	320
340	10.6	10.4	10.2	10.0	9.8	9.7	9.5	9.3	9.2	9.0	8.9	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.1	340
360	11.1	10.9	10.7	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.5	7.5	7.4	360
380	11.6	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7	380
400	12.0	11.8	11.6	11.3	11.1	10.9	10.8	10.6	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	8.0	400
420	12.5	12.3	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.2	10.0	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	420
440	13.0	12.7	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	8.8	8.7	440
460	13.4	13.2	12.9	12.7	12.4	12.2	12.0	11.8	11.6	11.4	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	460
480	13.9	13.6	13.4	13.1	12.9	12.7	12.4	12.2	12.0	11.8	11.7	11.5	11.3	11.2	11.0	10.9	10.8	10.6	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	480
500	14.4	14.1	13.8	13.6	13.3	13.1	12.9	12.7	12.4	12.3	12.1	11.9	11.7	11.6	11.4	11.3	11.1	11.0	10.9	10.7	10.6	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	500
600	16.7	16.4	16.1	15.8	15.5	15.2	15.0	14.7	14.5	14.3	14.1	13.9	13.7	13.5	13.3	13.1	13.0	12.8	12.7	12.5	12.4	12.2	12.1	12.0	11.9	11.8	11.6	11.5	11.4	11.3	600
700	19.1	18.7	18.3	18.0	17.7	17.4	17.1	16.8	16.6	16.3	16.1	15.8	15.6	15.4	15.2	15.0	14.8	14.7	14.5	14.3	14.2	14.0	13.9	13.7	13.6	13.4	13.3	13.2	13.1	13.0	700
800	21.4	21.0	20.6	20.2	19.9	19.5	19.2	18.9	18.6	18.3	18.1	17.8	17.6	17.3	17.1	16.9	16.7	16.5	16.3	16.1	15.9	15.8	15.6	15.4	15.3	15.1	15.0	14.9	14.7	14.6	800
900	23.7	23.3	22.8	22.4	22.0	21.7	21.3	21.0	20.7	20.3	20.1	19.8	19.5	19.2	19.0	18.8	18.5	18.3	18.1	17.9	17.7	17.5	17.3	17.2	17.0	16.8	16.7	16.5	16.4	16.2	900
1000	26.1	25.6	25.1	24.6	24.2	23.8	23.4	23.1	22.7	22.4	22.0	21.7	21.5	21.2	20.9	20.6	20.4	20.2	19.9	19.7	19.5	19.3	19.1	18.9	18.7	18.5	18.4	18.2	18.0	17.9	1000
1100	28.4	27.9	27.3	26.9	26.4	25.9	25.5	25.1	24.8	24.4	24.0	23.7	23.4	23.1	22.8	22.5	22.3	22.0	21.7	21.5	21.3	21.0	20.8	20.6	20.4	20.2	20.0	19.9	19.7	19.5	1100
1200	30.7	30.1	29.6	29.1	28.6	28.1	27.6	27.2	26.8	26.4	26.0	25.7	25.3	25.0	24.7	24.4	24.1	23.8	23.6	23.3	23.0	22.8	22.6	22.4	22.1	21.9	21.7	21.5	21.3	21.2	1200
1300	33.1	32.4	31.8	31.3	30.7	30.2	29.8	29.3	28.9	28.4	28.0	27.6	27.3	26.9	26.6	26.3	26.0	25.7	25.4	25.1	24.8	24.6	24.3	24.1	23.8	23.6	23.4	23.2	23.0	22.8	1300
1400	35.4	34.7	34.1	33.5	32.9	32.4	31.9	31.4	30.9	30.5	30.0	29.6	29.2	28.9	28.5	28.1	27.8	27.5	27.2	26.9	26.6	26.3	26.1	25.8	25.6	25.3	25.1	24.9	24.6	24.4	1400
1500	37.7	37.0	36.4	35.7	35.1	34.5	34.0	33.5	33.0	32.5	32.0	31.6	31.2	30.8	30.4	30.0	29.7	29.3	29.0	28.7	28.4	28.1	27.8	27.5	27.3	27.0	26.8	26.5	26.3	26.1	1500
Term. 2/	2.701	2.626	2.555	2.488	2.424	2.363	2.306	2.251	2.198	2.148	2.101	2.055	2.011	1.969	1.929	1.891	1.854	1.818	1.784	1.751	1.719	1.688	1.658	1.630	1.602	1.576	1.550	1.525	1.500	1.477	Term. 2/
L. H. 3/	.023361	.022935	.022531	.022149	.021786	.021441	.021113	.020801	.020503	.020219	.019948	.019688	.019439	.019201	.018972	.018753	.018542	.018339	.018144	.017956	.017775	.017601	.017432	.017270	.017113	.016961	.016814	.016672	.016534	.016401	L. H. 3/

1/ Based on a tare weight of 21.0 tons and a ratio of empty car miles to loaded car miles of 0.530. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.57.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.72.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 8 - Western Trunk Line, excl. No. Ill. & Sou. Mo.

TANK CARS

TABLE 53.--TERRITORY NO. 8 - WESTERN TRUNK LINE, excluding Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.4	14.5	12.5	10.9	9.7	8.8	8.0	7.3	6.7	6.3	5.9	5.5	5.2	4.9	4.6	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	10
20	18.8	15.7	13.5	11.8	10.5	9.5	8.6	7.9	7.3	6.8	6.4	6.0	5.6	5.3	5.1	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	20
30	20.2	16.9	14.5	12.7	11.3	10.2	9.3	8.6	7.9	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	30
40	21.6	18.1	15.5	13.6	12.1	11.0	10.0	9.2	8.5	7.9	7.4	7.0	6.6	6.2	5.9	5.6	5.4	5.2	4.9	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.6	3.5	3.4	40
50	23.0	19.2	16.5	14.5	12.9	11.7	10.7	9.8	9.1	8.5	7.9	7.5	7.0	6.7	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.0	3.9	3.8	3.7	50
60	24.4	20.4	17.6	15.4	13.8	12.4	11.3	10.4	9.7	9.0	8.4	7.9	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.5	4.3	4.2	4.1	4.0	60
70	25.8	21.6	18.6	16.3	14.6	13.2	12.0	11.1	10.3	9.6	9.0	8.4	8.0	7.6	7.2	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.4	4.3	70
80	27.2	22.7	19.6	17.2	15.4	13.9	12.7	11.7	10.8	10.1	9.5	8.9	8.4	8.0	7.6	7.3	7.0	6.7	6.4	6.2	5.9	5.7	5.6	5.4	5.2	5.1	4.9	4.8	4.7	4.5	80
90	28.6	23.9	20.6	18.1	16.2	14.6	13.4	12.3	11.4	10.7	10.0	9.4	8.9	8.5	8.0	7.7	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	90
100	30.0	25.1	21.6	19.0	17.0	15.4	14.1	12.9	12.0	11.2	10.5	9.9	9.4	8.9	8.5	8.1	7.7	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.8	5.7	5.5	5.4	5.2	5.1	100
120	32.7	27.4	23.7	20.8	18.6	16.8	15.4	14.2	13.2	12.3	11.6	10.9	10.3	9.8	9.3	8.9	8.5	8.2	7.9	7.6	7.3	7.1	6.8	6.6	6.4	6.3	6.1	5.9	5.8	5.6	120
140	35.5	29.8	25.7	22.6	20.2	18.3	16.8	15.5	14.4	13.4	12.6	11.9	11.2	10.7	10.2	9.7	9.3	8.9	8.6	8.3	8.0	7.7	7.5	7.3	7.1	6.9	6.7	6.5	6.3	6.2	140
160	38.3	32.1	27.7	24.4	21.8	19.8	18.1	16.7	15.5	14.5	13.6	12.9	12.2	11.6	11.0	10.5	10.1	9.7	9.3	9.0	8.7	8.4	8.1	7.9	7.7	7.5	7.3	7.1	6.9	6.7	160
180	41.1	34.5	29.8	26.2	23.5	21.3	19.5	18.0	16.7	15.6	14.7	13.8	13.1	12.5	11.9	11.4	10.9	10.5	10.1	9.7	9.4	9.1	8.8	8.5	8.3	8.0	7.8	7.6	7.4	7.3	180
200	43.9	36.8	31.8	28.0	25.1	22.7	20.8	19.2	17.9	16.7	15.7	14.8	14.0	13.3	12.7	12.2	11.7	11.2	10.8	10.4	10.1	9.7	9.4	9.1	8.9	8.6	8.4	8.2	8.0	7.8	200
220	46.7	39.2	33.8	29.8	26.7	24.2	22.2	20.5	19.0	17.8	16.7	15.8	15.0	14.2	13.6	13.0	12.4	12.0	11.5	11.1	10.7	10.4	10.1	9.8	9.5	9.2	9.0	8.8	8.6	8.4	220
240	49.4	41.5	35.9	31.6	28.3	25.7	23.5	21.7	20.2	18.9	17.8	16.8	15.9	15.1	14.4	13.8	13.2	12.7	12.3	11.8	11.4	11.1	10.7	10.4	10.1	9.8	9.6	9.3	9.1	8.9	240
260	52.2	43.9	37.9	33.4	29.9	27.2	24.9	23.0	21.4	20.0	18.8	17.8	16.8	16.0	15.3	14.6	14.0	13.5	13.0	12.5	12.1	11.7	11.4	11.0	10.7	10.4	10.2	9.9	9.7	9.5	260
280	55.0	46.2	39.9	35.2	31.6	28.6	26.2	24.2	22.5	21.1	19.8	18.7	17.8	16.9	16.1	15.4	14.8	14.2	13.7	13.2	12.8	12.4	12.0	11.7	11.3	11.0	10.8	10.5	10.2	10.0	280
300	57.8	48.6	42.0	37.0	33.2	30.1	27.6	25.5	23.7	22.2	20.9	19.7	18.7	17.8	17.0	16.2	15.6	15.0	14.5	13.9	13.5	13.1	12.7	12.3	12.0	11.6	11.3	11.1	10.8	10.5	300
320	60.6	50.9	44.0	38.8	34.8	31.6	28.9	26.7	24.9	23.3	21.9	20.7	19.6	18.7	17.8	17.1	16.4	15.7	15.2	14.6	14.2	13.7	13.3	12.9	12.6	12.2	11.9	11.6	11.4	11.1	320
340	63.4	53.3	46.0	40.6	36.4	33.0	30.3	28.0	26.0	24.4	22.9	21.7	20.6	19.6	18.7	17.9	17.2	16.5	15.9	15.4	14.8	14.4	14.0	13.5	13.2	12.8	12.5	12.2	11.9	11.6	340
360	66.2	55.6	48.1	42.4	38.0	34.5	31.6	29.2	27.2	25.5	24.0	22.7	21.5	20.5	19.5	18.7	17.9	17.3	16.6	16.1	15.5	15.0	14.6	14.2	13.8	13.4	13.1	12.8	12.5	12.2	360
380	68.9	58.0	50.1	44.2	39.6	36.0	33.0	30.5	28.4	26.6	25.0	23.6	22.4	21.3	20.4	19.5	18.7	18.0	17.4	16.8	16.2	15.7	15.2	14.8	14.4	14.0	13.7	13.3	13.0	12.7	380
400	71.7	60.3	52.1	46.0	41.3	37.5	34.3	31.7	29.6	27.7	26.0	24.6	23.4	22.2	21.2	20.3	19.5	18.8	18.1	17.5	16.9	16.4	15.9	15.4	15.0	14.6	14.3	13.9	13.6	13.3	400
420	74.5	62.6	54.2	47.8	42.9	38.9	35.7	33.0	30.7	28.8	27.1	25.6	24.3	23.1	22.1	21.1	20.3	19.5	18.8	18.2	17.6	17.0	16.5	16.1	15.6	15.2	14.8	14.5	14.1	13.8	420
440	77.3	65.0	56.2	49.6	44.5	40.4	37.1	34.3	31.9	29.9	28.1	26.6	25.2	24.0	22.9	22.0	21.1	20.3	19.6	18.9	18.3	17.7	17.2	16.7	16.2	15.8	15.4	15.0	14.7	14.4	440
460	80.1	67.3	58.2	51.4	46.1	41.9	38.4	35.5	33.1	31.0	29.1	27.6	26.1	24.9	23.8	22.8	21.9	21.0	20.3	19.6	19.0	18.4	17.8	17.3	16.8	16.4	16.0	15.6	15.3	14.9	460
480	82.9	69.7	60.3	53.2	47.7	43.3	39.8	36.8	34.2	32.1	30.2	28.5	27.1	25.8	24.6	23.6	22.7	21.8	21.0	20.3	19.6	19.0	18.5	18.0	17.5	17.0	16.6	16.2	15.8	15.5	480
500	85.6	72.0	62.3	55.0	49.4	44.8	41.1	38.0	35.4	33.2	31.2	29.5	28.0	26.7	25.5	24.4	23.4	22.6	21.8	21.0	20.3	19.7	19.1	18.6	18.1	17.6	17.2	16.8	16.4	16.0	500
600	99.6	83.8	72.5	64.0	57.4	52.2	47.9	44.3	41.2	38.6	36.4	34.4	32.7	31.1	29.7	28.5	27.4	26.3	25.4	24.5	23.8	23.0	22.3	21.7	21.1	20.6	20.1	19.6	19.2	18.7	600
700	113.5	95.5	82.7	73.0	65.5	59.5	54.6	50.6	47.1	44.1	41.6	39.3	37.3	35.6	34.0	32.6	31.3	30.1	29.1	28.1	27.2	26.3	25.6	24.9	24.2	23.6	23.0	22.5	21.9	21.5	700
800	127.4	107.2	92.8	82.0	73.6	66.9	61.4	56.8	52.9	49.6	46.7	44.2	42.0	40.0	38.2	36.7	35.2	33.9	32.7	31.6	30.6	29.7	28.8	28.0	27.3	26.6	25.9	25.3	24.7	24.2	800
900	141.3	119.0	103.0	91.0	81.7	74.3	68.2	63.1	58.8	55.1	51.9	49.1	46.7	44.5	42.5	40.7	39.1	37.7	36.4	35.1	34.0	33.0	32.0	31.2	30.3	29.6	28.8	28.2	27.5	26.9	900
1000	155.3	130.7	113.2	100.0	89.8	81.6	74.9	69.4	64.6	60.6	57.1	54.0	51.3	48.9	46.8	44.8	43.1	41.5	40.0	38.7	37.5	36.3	35.3	34.3	33.4	32.5	31.8	31.0	30.3	29.7	1000
1100	169.2	142.5	123.4	109.0	97.9	89.0	81.7	75.6	70.5	66.1	62.3	58.9	56.0	53.4	51.0	48.9	47.0	45.3	43.7	42.2	40.9	39.6	38.5	37.4	36.5	35.5	34.7	33.9	33.1	32.4	1100
1200	183.1	154.2	133.5	118.0	106.0	96.4	88.5	81.9	76.3	71.6	67.4	63.8	60.6	57.8	55.3	53.0	50.9	49.0	47.3	45.7	44.3	43.0	41.7	40.6	39.5	38.5	37.6	36.7	35.9	35.1	1200
1300	197.0	165.9	143.7	127.0	114.1	103.7	95.2	88.2	82.2	77.1	72.6	68.7	65.3	62.2	59.5	57.1	54.8	52.8	51.0	49.3	47.7	46.3	45.0	43.7	42.6	41.5	40.5	39.6	38.7	37.8	1300
1400	211.0	177.7	153.9	136.0	122.2	111.1	102.0	94.4	88.0	82.5	77.8	73.6	69.9	66.7	63.8	61.1	58.8	56.6	54.6	52.8	51.2	49.6	48.2	46.9	45.6	44.5	43.4	42.4	41.5	40.6	1400
1500	224.9	189.4	164.1	145.0	130.3	118.4	108.8	100.7	93.9	88.0	83.0	78.5	74.6	71.1	68.0	65.2	62.7	60.4	58.3	56.3	54.6	52.9	51.4	50.0	48.7	47.5	46.3	45.3	44.3	43.3	1500
Term. 2/	16.028	13.357	11.449	10.018	8.904	8.014	7.285	6.678	6.165	5.724	5.343	5.009	4.714	4.452	4.218	4.007	3.816	3.643	3.484	3.339	3.206	3.082	2.968	2.862	2.763	2.671	2.585	2.504	2.428	2.357	Term. 2/
L. H. 3/	.139230	.117358	.101736	.090019	.080906	.073615	.067650	.062679	.058473	.054868	.051743	.049009	.046597	.044453	.042534	.040808	.039245	.037825	.036528	.035340	.034246	.033237	.032302	.031434	.030626	.029872	.029166	.028505	.027883	.027299	L. H. 3/

1/ Based on a tare weight of 22.6 tons and a ratio of empty car miles to loaded car miles of 0.990. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.57.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.72.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 53 (Concluded).--TERRITORY NO. 8 - WESTERN TRUNK LINE, excluding Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.6	2.5	2.4	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.8	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20	2.8	2.8	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40	3.4	3.3	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.6	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100	5.0	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
120	5.5	5.4	5.3	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
140	6.0	5.9	5.8	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.6	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
160	6.6	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
180	7.1	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	5.9	5.8	5.7	5.7	5.6	5.5	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
200	7.6	7.5	7.3	7.2	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
220	8.2	8.0	7.8	7.7	7.5	7.4	7.2	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
240	8.7	8.5	8.3	8.2	8.0	7.9	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
260	9.2	9.0	8.9	8.7	8.5	8.3	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
280	9.8	9.6	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.9	7.7	7.6	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
300	10.3	10.1	9.9	9.7	9.5	9.3	9.2	9.0	8.8	8.7	8.6	8.4	8.3	8.2	8.1	7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
320	10.8	10.6	10.4	10.2	10.0	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.7	8.6	8.5	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
340	11.4	11.1	10.9	10.7	10.5	10.3	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
360	11.9	11.7	11.4	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.3	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
380	12.5	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
400	13.0	12.7	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.2	10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
420	13.5	13.2	13.0	12.7	12.5	12.3	12.0	11.8	11.6	11.4	11.3	11.1	10.9	10.8	10.6	10.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
440	14.1	13.8	13.5	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.4	11.2	11.0	10.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
460	14.6	14.3	14.0	13.7	13.5	13.2	13.0	12.8	12.6	12.4	12.2	12.0	11.8	11.6	11.5	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
480	15.1	14.8	14.5	14.2	14.0	13.7	13.5	13.2	13.0	12.8	12.6	12.4	12.2	12.1	11.9	11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
500	15.7	15.3	15.0	14.7	14.5	14.2	14.0	13.7	13.5	13.3	13.1	12.9	12.7	12.5	12.3	12.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
600	18.3	18.0	17.6	17.3	16.9	16.6	16.4	16.1	15.8	15.6	15.3	15.1	14.9	14.7	14.5	14.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
700	21.0	20.6	20.2	19.8	19.4	19.1	18.8	18.4	18.1	17.9	17.6	17.3	17.1	16.8	16.6	16.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
800	23.7	23.2	22.8	22.3	21.9	21.5	21.2	20.8	20.5	20.2	19.8	19.6	19.3	19.0	18.7	18.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
900	26.4	25.8	25.3	24.8	24.4	24.0	23.6	23.2	22.8	22.4	22.1	21.8	21.5	21.2	20.9	20.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
1000	29.0	28.5	27.9	27.4	26.9	26.4	26.0	25.5	25.1	24.7	24.4	24.0	23.7	23.3	23.0	22.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
1100	31.7	31.1	30.5	29.9	29.4	28.8	28.4	27.9	27.4	27.0	26.6	26.2	25.9	25.5	25.2	24.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
1200	34.4	33.7	33.0	32.4	31.8	31.3	30.8	30.3	29.8	29.3	28.9	28.5	28.1	27.7	27.3	27.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1300	37.1	36.3	35.6	35.0	34.3	33.7	33.2	32.6	32.1	31.6	31.1	30.7	30.3	29.8	29.4	29.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
1400	39.7	38.9	38.2	37.5	36.8	36.2	35.6	35.0	34.4	33.9	33.4	32.9	32.5	32.0	31.6	31.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1500	42.4	41.6	40.8	40.0	39.3	38.6	38.0	37.3	36.8	36.2	35.7	35.1	34.6	34.2	33.7	33.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
Term. 2/	2.290	2.226	2.166	2.109	2.055	2.004	1.955	1.908	1.864	1.821	1.781	1.742	1.705	1.670	1.636	1.603	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.026747	.026226	.025734	.025267	.024824	.024404	.024004	.023623	.023259	.022913	.022581	.022264	.021961	.021670	.021391	.021123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.990. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.57.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.72.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 8 - Western Trunk Line, excl. No. Ill. & Sou. Mo.

STOCK CARS

TABLE 54.—TERRITORY NO. 8 - WESTERN TRUNK LINE, excluding Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.1	16.7	14.4	12.6	11.2	10.1	9.2	8.4	7.8	7.2	6.7	6.3	6.0	5.6	5.3	5.1	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.5	3.4	-	-	-	-	10
20	21.3	17.7	15.2	13.3	11.9	10.7	9.7	8.9	8.3	7.7	7.2	6.8	6.4	6.0	5.7	5.4	5.2	5.0	4.7	4.6	4.4	4.2	4.1	3.9	3.8	3.7	-	-	-	-	20
30	22.4	18.7	16.1	14.1	12.6	11.3	10.3	9.5	8.8	8.2	7.6	7.2	6.8	6.4	6.1	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.1	3.9	-	-	-	-	30
40	23.6	19.7	16.9	14.9	13.3	12.0	10.9	10.0	9.3	8.6	8.1	7.6	7.2	6.8	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	-	-	-	-	40
50	24.8	20.7	17.8	15.6	13.9	12.6	11.5	10.6	9.8	9.1	8.5	8.0	7.6	7.2	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	-	-	-	-	50
60	25.9	21.7	18.7	16.4	14.6	13.2	12.1	11.1	10.3	9.6	9.0	8.4	8.0	7.6	7.2	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	-	-	-	-	60
70	27.1	22.7	19.5	17.2	15.3	13.8	12.6	11.6	10.8	10.0	9.4	8.9	8.4	7.9	7.5	7.2	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	5.0	-	-	-	-	70
80	28.3	23.7	20.4	17.9	1600	14.5	13.2	12.2	11.3	10.5	9.9	9.3	8.8	8.3	7.9	7.6	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	-	-	-	-	80
90	29.5	24.7	21.2	18.7	16.7	15.1	13.8	12.7	11.8	11.0	10.3	9.7	9.2	8.7	8.3	7.9	7.6	7.3	7.0	6.7	6.5	6.2	6.0	5.9	5.7	5.5	-	-	-	-	90
100	30.6	25.7	22.1	19.4	17.4	15.7	14.4	13.2	12.3	11.5	10.7	10.1	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.8	-	-	-	-	100
120	33.0	27.6	23.8	21.0	18.7	17.0	15.5	14.3	13.3	12.4	11.6	11.0	10.4	9.9	9.4	9.0	8.6	8.2	7.9	7.6	7.4	7.1	6.9	6.7	6.5	6.3	-	-	-	-	120
140	35.3	29.6	25.5	22.5	20.1	18.2	16.7	15.4	14.3	13.3	12.5	11.8	11.2	10.6	10.1	9.7	9.3	8.9	8.6	8.2	8.0	7.7	7.5	7.2	7.0	6.8	-	-	-	-	140
160	37.7	31.6	27.3	24.0	21.5	19.5	17.8	16.4	15.3	14.3	13.4	12.7	12.0	11.4	10.9	10.4	9.9	9.5	9.2	8.9	8.6	8.3	8.0	7.8	7.6	7.3	-	-	-	-	160
180	40.0	33.6	29.0	25.5	22.9	20.7	19.0	17.5	16.3	15.2	14.3	13.5	12.8	12.2	11.6	11.1	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.3	8.1	7.9	-	-	-	-	180
200	42.4	35.6	30.7	27.1	24.2	22.0	20.1	18.6	17.3	16.2	15.2	14.3	13.6	12.9	12.3	11.8	11.3	10.9	10.5	10.1	9.8	9.4	9.1	8.9	8.6	8.4	-	-	-	-	200
220	44.7	37.5	32.4	28.6	25.6	23.2	21.3	19.7	18.3	17.1	16.1	15.2	14.4	13.7	13.1	12.5	12.0	11.5	11.1	10.7	10.3	10.0	9.7	9.4	9.2	8.9	-	-	-	-	220
240	47.0	39.5	34.2	30.1	27.0	24.5	22.4	20.7	19.3	18.0	17.0	16.0	15.2	14.5	13.8	13.2	12.7	12.2	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.4	-	-	-	-	240
260	49.4	41.5	35.9	31.6	28.4	25.7	23.6	21.8	20.3	19.0	17.9	16.9	16.0	15.2	14.5	13.9	13.3	12.8	12.4	11.9	11.5	11.2	10.8	10.5	10.2	10.0	-	-	-	-	260
280	51.7	43.5	37.6	33.2	29.7	27.0	24.7	22.9	21.3	19.9	18.7	17.7	16.8	16.0	15.3	14.6	14.0	13.5	13.0	12.6	12.1	11.8	11.4	11.1	10.8	10.5	-	-	-	-	280
300	54.1	46.5	39.3	34.7	31.1	28.2	25.9	23.9	22.3	20.9	19.6	18.6	17.6	16.8	16.0	15.3	14.7	14.1	13.6	13.2	12.7	12.3	12.0	11.6	11.3	11.0	-	-	-	-	300
320	56.4	47.4	41.0	36.2	32.5	29.5	27.0	25.0	23.3	21.8	20.5	19.4	18.4	17.5	16.7	16.0	15.4	14.8	14.3	13.8	13.3	12.9	12.5	12.2	11.8	11.5	-	-	-	-	320
340	58.8	49.4	42.8	37.8	33.9	30.7	28.2	26.1	24.3	22.7	21.4	20.2	19.2	18.3	17.5	16.7	16.1	15.5	14.9	14.4	13.9	13.5	13.1	12.7	12.4	12.1	-	-	-	-	340
360	61.1	51.4	44.5	39.3	35.2	32.0	29.4	27.1	25.3	23.7	22.3	21.1	20.0	19.1	18.2	17.4	16.7	16.1	15.5	15.0	14.5	14.1	13.7	13.3	12.9	12.6	-	-	-	-	360
380	63.5	53.4	46.2	40.8	36.6	33.3	30.5	28.2	26.3	24.6	23.2	21.9	20.8	19.8	18.9	18.1	17.4	16.8	16.2	15.6	15.1	14.7	14.2	13.8	13.5	13.1	-	-	-	-	380
400	65.8	55.4	47.9	42.3	38.0	34.5	31.7	29.3	27.3	25.6	24.1	22.8	21.6	20.6	19.7	18.9	18.1	17.4	16.8	16.2	15.7	15.2	14.8	14.4	14.0	13.6	-	-	-	-	400
420	68.2	57.4	49.6	43.9	39.4	35.8	32.8	30.4	28.3	26.5	25.0	23.6	22.4	21.4	20.4	19.6	18.8	18.1	17.4	16.9	16.3	15.8	15.4	14.9	14.5	14.2	-	-	-	-	420
440	70.5	59.3	51.4	45.4	40.7	37.0	34.0	31.4	29.3	27.4	25.8	24.5	23.2	22.1	21.1	20.3	19.5	18.7	18.1	17.5	16.9	16.4	15.9	15.5	15.1	14.7	-	-	-	-	440
460	72.8	61.3	53.1	46.9	42.1	38.3	35.1	32.5	30.3	28.4	26.7	25.3	24.0	22.9	21.9	21.0	20.1	19.4	18.7	18.1	17.5	17.0	16.5	16.0	15.6	15.2	-	-	-	-	460
480	75.2	63.3	54.8	48.4	43.5	39.5	36.3	33.6	31.3	29.3	27.6	26.1	24.8	23.7	22.6	21.7	20.8	20.1	19.4	18.7	18.1	17.6	17.1	16.6	16.1	15.7	-	-	-	-	480
500	77.5	65.3	56.5	50.0	44.9	40.8	37.4	34.6	32.3	30.3	28.5	27.0	25.6	24.4	23.4	22.4	21.5	20.7	20.0	19.3	18.7	18.1	17.6	17.1	16.7	16.3	-	-	-	-	500
600	89.3	75.2	65.1	57.6	51.7	47.0	43.2	40.0	37.3	35.0	33.0	31.2	29.6	28.3	27.0	25.9	24.9	24.0	23.2	22.4	21.7	21.0	20.4	19.9	19.4	18.9	-	-	-	-	600
700	101.0	85.1	73.7	65.2	58.6	53.3	49.0	45.3	42.3	39.7	37.4	35.4	33.7	32.1	30.7	29.4	28.3	27.3	26.3	25.5	24.7	23.9	23.3	22.6	22.0	21.5	-	-	-	-	700
800	112.7	95.0	82.3	72.8	65.5	59.6	54.7	50.7	47.3	44.4	41.8	39.6	37.7	35.9	34.4	33.0	31.7	30.6	29.5	28.5	27.7	26.8	26.1	25.4	24.7	24.1	-	-	-	-	800
900	124.4	104.9	90.9	80.5	72.3	65.8	60.5	56.0	52.3	49.1	46.3	43.8	41.7	39.8	38.1	36.5	35.1	33.8	32.7	31.6	30.6	29.7	28.9	28.1	27.4	26.7	-	-	-	-	900
1000	136.2	114.8	99.5	88.1	79.2	72.1	66.3	61.4	57.3	53.8	50.7	48.0	45.7	43.6	41.7	40.0	38.5	37.1	35.9	34.7	33.6	32.6	31.7	30.9	30.1	29.4	-	-	-	-	1000
1100	147.9	124.7	108.1	95.7	86.1	78.3	72.0	66.8	62.3	58.5	55.2	52.3	49.7	47.4	45.4	43.6	41.9	40.4	39.0	37.8	36.6	35.5	34.6	33.6	32.8	32.0	-	-	-	-	1100
1200	159.6	134.6	116.7	103.4	92.9	84.6	77.8	72.1	67.3	63.2	59.6	56.5	53.7	51.3	49.1	47.1	45.3	43.7	42.2	40.9	39.6	38.4	37.4	36.4	35.5	34.6	-	-	-	-	1200
1300	171.3	144.5	125.4	111.0	99.8	90.9	83.6	77.5	72.3	67.9	64.0	60.7	57.7	55.1	52.8	50.6	48.7	47.0	45.4	43.9	42.6	41.3	40.2	39.1	38.1	37.2	-	-	-	-	1300
1400	183.1	154.4	134.0	118.6	106.7	97.1	89.3	82.8	77.3	72.6	68.5	64.9	61.7	58.9	56.4	54.2	52.1	50.3	48.6	47.0	45.6	44.3	43.0	41.9	40.8	39.8	-	-	-	-	1400
1500	194.8	164.3	142.6	126.2	113.5	103.4	95.1	88.2	82.3	77.3	72.9	69.1	65.8	62.8	60.1	57.7	55.5	53.5	51.7	50.1	48.6	47.2	45.8	44.6	43.5	42.5	-	-	-	-	1500
Term. 2/	18.906	15.755	13.504	11.816	10.503	9.453	8.594	7.878	7.272	6.752	6.302	5.908	5.561	5.252	4.975	4.727	4.501	4.297	4.110	3.939	3.781	3.636	3.501	3.376	3.260	3.151	-	-	-	-	Term. 2/
L. H. 3/	.117250	.099042	.086036	.076281	.068694	.062625	.057659	.053521	.050019	.047018	.044417	.042141	.040132	.038347	.036750	.035313	.034012	.032830	.031750	.030760	.029850	.029010	.028231	.027509	.026836	.026208	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 20.1 tons and a ratio of empty car miles to loaded car miles of 0.906. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.57.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.72.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 55.—TERRITORY NO. 8 - WESTERN TRUNK LINE, excluding Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.5	14.6	12.5	10.9	9.7	8.8	8.0	7.3	6.8	6.3	5.9	5.5	5.2	4.9	4.7	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3	3.2	3.1	3.0	-	-	-	-	10
20	18.9	15.8	13.5	11.9	10.6	9.5	8.7	8.0	7.4	6.8	6.4	6.0	5.7	5.4	5.1	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.6	3.5	3.4	3.3	-	-	-	-	20
30	20.3	17.0	14.6	12.8	11.4	10.3	9.4	8.6	8.0	7.4	6.9	6.5	6.1	5.8	5.5	5.3	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.8	3.7	3.6	-	-	-	-	30
40	21.7	18.2	15.6	13.7	12.2	11.0	10.1	9.2	8.6	8.0	7.5	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	-	-	-	-	40
50	23.2	19.4	16.7	14.6	13.0	11.8	10.7	9.9	9.2	8.5	8.0	7.5	7.1	6.7	6.4	6.1	5.8	5.6	5.3	5.1	5.0	4.8	4.6	4.5	4.3	4.2	-	-	-	-	50
60	24.6	20.6	17.7	15.5	13.9	12.5	11.4	10.5	9.8	9.1	8.5	8.0	7.6	7.2	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	-	-	-	-	60
70	26.0	21.8	18.7	16.5	14.7	13.3	12.1	11.2	10.3	9.6	9.0	8.5	8.0	7.6	7.3	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	4.9	4.8	-	-	-	-	70
80	27.4	23.0	19.8	17.4	15.5	14.0	12.8	11.8	10.9	10.2	9.6	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.3	5.1	-	-	-	-	80
90	28.9	24.2	20.8	18.3	16.4	14.8	13.5	12.4	11.5	10.8	10.1	9.5	9.0	8.5	8.1	7.8	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.6	5.4	-	-	-	-	90
100	30.3	25.4	21.9	19.2	17.2	15.5	14.2	13.1	12.1	11.3	10.6	10.0	9.5	9.0	8.6	8.2	7.8	7.5	7.2	6.9	6.7	6.5	6.3	6.1	5.9	5.7	-	-	-	-	100
120	33.1	27.8	23.9	21.1	18.8	17.0	15.6	14.4	13.3	12.5	11.7	11.0	10.4	9.9	9.4	9.0	8.6	8.3	8.0	7.7	7.4	7.1	6.9	6.7	6.5	6.3	-	-	-	-	120
140	36.0	30.2	26.0	22.9	20.5	18.6	17.0	15.6	14.5	13.6	12.7	12.0	11.4	10.8	10.3	9.8	9.4	9.0	8.7	8.4	8.1	7.8	7.6	7.3	7.1	6.9	-	-	-	-	140
160	38.8	32.6	28.1	24.8	22.1	20.1	18.4	16.9	15.7	14.7	13.8	13.0	12.3	11.7	11.2	10.7	10.2	9.8	9.4	9.1	8.8	8.5	8.2	8.0	7.8	7.5	-	-	-	-	160
180	41.7	35.0	30.2	26.6	23.8	21.6	19.7	18.2	16.9	15.8	14.9	14.0	13.3	12.6	12.0	11.5	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.4	8.1	-	-	-	-	180
200	44.5	37.4	32.3	28.4	25.5	23.1	21.1	19.5	18.1	16.9	15.9	15.0	14.2	13.5	12.9	12.3	11.8	11.4	10.9	10.5	10.2	9.9	9.6	9.3	9.0	8.8	-	-	-	-	200
220	47.4	39.8	34.4	30.3	27.1	24.6	22.5	20.8	19.3	18.1	17.0	16.0	15.2	14.4	13.8	13.2	12.6	12.1	11.7	11.3	10.9	10.5	10.2	9.9	9.6	9.4	-	-	-	-	220
240	50.2	42.2	36.4	32.1	28.8	26.1	23.9	22.1	20.5	19.2	18.0	17.0	16.1	15.3	14.6	14.0	13.4	12.9	12.4	12.0	11.6	11.2	10.9	10.5	10.3	10.0	-	-	-	-	240
260	53.1	44.6	38.5	34.0	30.4	27.6	25.3	23.3	21.7	20.3	19.1	18.0	17.1	16.3	15.5	14.8	14.2	13.7	13.2	12.7	12.3	11.9	11.5	11.2	10.9	10.6	-	-	-	-	260
280	56.0	47.0	40.6	35.8	32.1	29.1	26.7	24.6	22.9	21.4	20.1	19.0	18.0	17.2	16.4	15.7	15.0	14.4	13.9	13.4	13.0	12.6	12.2	11.8	11.5	11.2	-	-	-	-	280
300	58.8	49.4	42.7	37.7	33.7	30.6	28.0	25.9	24.1	22.5	21.2	20.0	19.0	18.1	17.2	16.5	15.8	15.2	14.7	14.2	13.7	13.2	12.8	12.5	12.1	11.8	-	-	-	-	300
320	61.7	51.8	44.8	39.5	35.4	32.1	29.4	27.2	25.3	23.7	22.3	21.0	19.9	19.0	18.1	17.3	16.6	16.0	15.4	14.9	14.4	13.9	13.5	13.1	12.7	12.4	-	-	-	-	320
340	64.5	54.2	46.9	41.3	37.0	33.6	30.8	28.5	26.5	24.8	23.3	22.0	20.9	19.9	19.0	18.2	17.4	16.8	16.2	15.6	15.1	14.6	14.2	13.8	13.4	13.0	-	-	-	-	340
360	67.4	56.6	48.9	43.2	38.7	35.1	32.2	29.7	27.7	25.9	24.4	23.0	21.8	20.8	19.8	19.0	18.2	17.5	16.9	16.3	15.8	15.3	14.8	14.4	14.0	13.6	-	-	-	-	360
380	70.2	59.0	51.0	45.0	40.4	36.6	33.6	31.0	28.9	27.0	25.4	24.0	22.8	21.7	20.7	19.8	19.0	18.3	17.6	17.0	16.5	16.0	15.5	15.0	14.6	14.2	-	-	-	-	380
400	73.1	61.4	53.1	46.9	42.0	38.1	35.0	32.3	30.1	28.1	26.5	25.0	23.7	22.6	21.6	20.7	19.8	19.1	18.4	17.8	17.2	16.6	16.1	15.7	15.2	14.8	-	-	-	-	400
420	75.9	63.8	55.2	48.7	43.7	39.6	36.3	33.6	31.3	29.3	27.5	26.0	24.7	23.5	22.5	21.5	20.6	19.8	19.1	18.5	17.9	17.3	16.8	16.3	15.9	15.5	-	-	-	-	420
440	78.8	66.2	57.3	50.5	45.3	41.1	37.7	34.9	32.5	30.4	28.6	27.0	25.7	24.4	23.3	22.3	21.4	20.6	19.9	19.2	18.6	18.0	17.5	17.0	16.5	16.1	-	-	-	-	440
460	81.6	68.6	59.3	52.4	47.0	42.6	39.1	36.2	33.7	31.5	29.7	28.0	26.6	25.3	24.2	23.2	22.2	21.4	20.6	19.9	19.3	18.7	18.1	17.6	17.1	16.7	-	-	-	-	460
480	84.5	71.0	61.4	54.2	48.6	44.2	40.5	37.4	34.9	32.6	30.7	29.0	27.6	26.2	25.1	24.0	23.0	22.2	21.4	20.6	20.0	19.3	18.8	18.2	17.7	17.3	-	-	-	-	480
500	87.3	73.4	63.5	56.1	50.3	45.7	41.9	38.7	36.0	33.8	31.8	30.0	28.5	27.1	25.9	24.8	23.8	22.9	22.1	21.4	20.7	20.0	19.4	18.9	18.4	17.9	-	-	-	-	500
600	101.6	85.4	73.9	65.3	58.6	53.2	48.8	45.1	42.0	39.4	37.1	35.0	33.3	31.7	30.3	29.0	27.8	26.8	25.8	25.0	24.2	23.4	22.7	22.1	21.5	20.9	-	-	-	-	600
700	115.8	97.5	84.3	74.5	66.8	60.7	55.7	51.5	48.0	45.0	42.3	40.0	38.0	36.2	34.6	33.2	31.8	30.7	29.6	28.6	27.6	26.8	26.0	25.3	24.6	24.0	-	-	-	-	700
800	130.1	109.5	94.8	83.7	75.1	68.2	62.6	57.9	54.0	50.6	47.6	45.1	42.8	40.8	39.0	37.3	35.9	34.5	33.3	32.2	31.1	30.2	29.3	28.5	27.7	27.0	-	-	-	-	800
900	144.4	121.5	105.2	92.9	83.4	75.8	69.5	64.3	60.0	56.2	52.9	50.1	47.5	45.3	43.3	41.5	39.9	38.4	37.0	35.8	34.6	33.6	32.6	31.7	30.8	30.1	-	-	-	-	900
1000	158.6	133.5	115.6	102.1	91.7	83.3	76.5	70.8	65.9	61.8	58.2	55.1	52.3	49.8	47.6	45.7	43.9	42.2	40.7	39.4	38.1	37.0	35.9	34.9	34.0	33.1	-	-	-	-	1000
1100	172.9	146.5	126.0	111.3	99.9	90.8	83.4	77.2	71.9	67.4	63.5	60.1	57.1	54.4	52.0	49.8	47.9	46.1	44.5	43.0	41.6	40.4	39.2	38.1	37.1	36.1	-	-	-	-	1100
1200	187.1	157.5	136.4	120.6	108.2	98.4	90.3	83.6	77.9	73.0	68.8	65.1	61.8	58.9	56.3	54.0	51.9	49.9	48.2	46.6	45.1	43.7	42.5	41.3	40.2	39.2	-	-	-	-	1200
1300	201.4	169.6	146.8	129.8	116.5	105.9	97.2	90.0	83.9	78.6	74.1	70.1	66.6	63.4	60.7	58.1	55.9	53.8	51.9	50.2	48.6	47.1	45.8	44.5	43.3	42.2	-	-	-	-	1300
1400	215.6	181.6	157.2	139.0	124.8	113.4	104.1	96.4	89.8	84.2	79.3	75.1	71.3	68.0	65.0	62.3	59.9	57.7	55.6	53.8	52.1	50.5	49.1	47.7	46.4	45.3	-	-	-	-	1400
1500	229.9	193.6	167.6	148.2	133.1	120.9	111.0	102.8	95.8	89.8	84.6	80.1	76.1	72.5	69.3	66.5	63.9	61.5	59.4	57.4	55.6	53.9	52.4	50.9	49.6	48.3	-	-	-	-	1500
Term. 2/	16.028	13.357	11.449	10.013	8.904	8.014	7.285	6.678	6.165	5.724	5.343	5.009	4.714	4.452	4.218	4.007	3.816	3.643	3.484	3.339	3.206	3.082	2.968	2.862	2.763	2.671	-	-	-	-	Term. 2/
L. H. 3/	.148580	.120150	.104129	.092113	.082767	.075290	.069173	.064075	.059762	.056064	.052860	.050056	.047582	.045383	.043416	.041645	.040043	.038586	.037257	.036038	.034916	.033881	.032922	.032032	.031203	.030430	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.698. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The retur is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.57.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.72.

Note: The above costs do not include an allowance for loss and damage. See Table 57 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 8 - Western Trunk Line, excl. No. Ill. & Sou. Mo.

LESS-CARLOAD

TABLE 56.--TERRITORY NO. 8 - WESTERN TRUNK LINE, excluding Northern Illinois and Southern Missouri

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes For 1939 1/

Miles	Net load in tons per car																											Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	91.6	73.2	64.0	58.5	54.8	52.1	50.2	48.6	47.4	46.4	45.6	44.9	44.3	43.7	43.3	42.9	42.5	42.2	41.9	41.6	41.4	41.2	41.0	40.8	40.6	40.5	40.3	40.2	40.1	10
20	96.3	76.4	66.0	60.5	56.5	53.6	51.5	49.8	48.5	47.4	46.5	45.8	45.1	44.5	44.0	43.6	43.2	42.9	42.5	42.3	42.0	41.8	41.5	41.3	41.2	41.0	40.8	40.7	40.5	20
30	101.1	79.7	68.9	62.5	58.2	55.1	52.8	51.1	49.6	48.5	47.5	46.7	45.9	45.3	44.8	44.3	43.9	43.5	43.2	42.9	42.6	42.3	42.1	41.9	41.7	41.5	41.3	41.2	41.0	30
40	105.9	82.9	71.4	64.5	59.9	56.6	54.2	52.3	50.7	49.5	48.4	47.6	46.8	46.1	45.6	45.1	44.6	44.2	43.8	43.5	43.2	42.9	42.7	42.5	42.2	42.1	41.9	41.7	41.5	40
50	110.6	86.1	73.9	66.5	61.6	58.1	55.5	53.5	51.8	50.5	49.4	48.4	47.6	46.9	46.3	45.8	45.3	44.9	44.5	44.1	43.8	43.5	43.3	43.0	42.8	42.6	42.4	42.2	42.0	50
60	115.4	89.4	76.4	68.6	63.4	59.6	56.8	54.7	52.9	51.5	50.3	49.3	48.5	47.7	47.1	46.5	46.0	45.5	45.1	44.8	44.4	44.1	43.8	43.6	43.3	43.1	42.9	42.7	42.5	60
70	120.2	92.6	78.8	70.6	65.1	61.1	58.2	55.9	54.1	52.5	51.3	50.2	49.3	48.5	47.9	47.2	46.7	46.2	45.8	45.4	45.0	44.7	44.4	44.1	43.9	43.6	43.4	43.2	43.0	70
80	124.9	95.9	81.3	72.6	66.8	62.6	59.5	57.1	55.2	53.6	52.2	51.1	50.2	49.3	48.6	48.0	47.4	46.9	46.4	46.0	45.6	45.3	45.0	44.7	44.4	44.2	43.9	43.7	43.5	80
90	129.7	99.1	83.8	74.6	68.5	64.1	60.9	58.3	56.3	54.6	53.2	52.0	51.0	50.1	49.4	48.7	48.1	47.6	47.1	46.6	46.2	45.9	45.6	45.2	45.0	44.7	44.5	44.2	44.0	90
100	134.5	102.3	86.3	76.7	70.2	65.6	62.2	59.5	57.4	55.6	54.2	52.9	51.9	50.9	50.1	49.4	48.8	48.2	47.7	47.3	46.9	46.5	46.1	45.8	45.5	45.2	45.0	44.7	44.5	100
120	144.0	108.8	91.2	80.7	73.7	68.6	64.9	61.9	59.6	57.7	56.1	54.7	53.6	52.5	51.7	50.9	50.2	49.6	49.0	48.5	48.1	47.7	47.3	46.9	46.6	46.3	46.0	45.8	45.5	120
140	153.6	115.3	96.2	84.7	77.1	71.6	67.5	64.3	61.8	59.7	58.0	56.5	55.2	54.2	53.2	52.4	51.6	50.9	50.3	49.8	49.3	48.8	48.4	48.0	47.7	47.4	47.1	46.8	46.5	140
160	163.1	121.8	101.2	88.8	80.5	74.6	70.2	66.8	64.0	61.8	59.9	58.3	56.9	55.8	54.7	53.8	53.0	52.3	51.6	51.0	50.5	50.0	49.6	49.2	48.8	48.4	48.1	47.8	47.5	160
180	172.6	128.3	106.1	92.8	84.0	77.6	72.9	69.2	66.2	63.8	61.8	60.1	58.6	57.4	56.3	55.3	54.4	53.6	52.9	52.3	51.7	51.2	50.7	50.3	49.9	49.5	49.1	48.8	48.5	180
200	182.2	134.8	111.1	96.9	87.4	80.6	75.5	71.6	68.4	65.9	63.7	61.9	60.3	59.0	57.8	56.7	55.8	55.0	54.2	53.5	52.9	52.4	51.9	51.4	50.9	50.5	50.2	49.8	49.5	200
220	191.7	141.3	116.0	100.9	90.8	83.6	78.2	74.0	70.7	67.9	65.6	63.7	62.0	60.6	59.3	58.2	57.2	56.3	55.5	54.8	54.1	53.5	53.0	52.5	52.0	51.6	51.2	50.8	50.5	220
240	201.2	147.7	121.0	105.0	94.3	86.6	80.9	76.4	72.9	69.9	67.5	65.5	63.7	62.2	60.8	59.7	58.6	57.7	56.8	56.1	55.4	54.7	54.1	53.6	53.1	52.7	52.2	51.8	51.5	240
260	210.8	154.2	126.0	109.0	97.7	89.6	83.6	78.8	75.1	72.0	69.4	67.3	65.4	63.8	62.4	61.1	60.0	59.0	58.1	57.3	56.6	55.9	55.3	54.7	54.2	53.7	53.3	52.9	52.5	260
280	220.3	160.7	130.9	113.0	101.1	92.6	86.2	81.3	77.3	74.0	71.3	69.0	67.1	65.4	63.9	62.6	61.4	60.4	59.4	58.6	57.8	57.1	56.4	55.8	55.3	54.8	54.3	53.9	53.5	280
300	229.8	167.2	135.9	117.1	104.6	95.6	88.9	83.7	79.5	76.1	73.2	70.8	68.8	67.0	65.4	64.0	62.8	61.7	60.7	59.8	59.0	58.3	57.6	57.0	56.4	55.8	55.3	54.9	54.5	300
320	239.4	173.7	140.8	121.1	108.0	98.6	91.6	86.1	81.7	78.1	75.1	72.6	70.5	68.6	66.9	65.5	64.2	63.0	62.0	61.1	60.2	59.4	58.7	58.1	57.5	56.9	56.4	55.9	55.4	320
340	248.9	180.2	145.8	125.2	111.4	101.6	94.2	88.5	83.9	80.2	77.1	74.4	72.1	70.2	68.5	66.9	65.6	64.4	63.3	62.3	61.4	60.6	59.9	59.2	58.6	58.0	57.4	56.9	56.4	340
360	258.4	186.7	150.8	129.2	114.9	104.6	96.9	90.9	86.1	82.2	79.0	76.2	73.8	71.8	70.0	68.4	67.0	65.7	64.6	63.6	62.6	61.8	61.0	60.3	59.6	59.0	58.5	57.9	57.4	360
380	268.0	193.1	155.7	133.3	118.3	107.6	99.6	93.3	88.4	84.3	80.9	78.0	75.5	73.4	71.5	69.9	68.4	67.1	65.9	64.8	63.9	63.0	62.2	61.4	60.7	60.1	59.5	58.9	58.4	380
400	277.5	199.6	160.7	137.3	121.7	110.6	102.3	95.8	90.6	86.3	82.8	79.8	77.2	75.0	73.1	71.3	69.8	68.4	67.2	66.1	65.1	64.2	63.3	62.5	61.8	61.1	60.5	60.0	59.4	400
420	287.1	206.1	165.6	141.4	125.2	113.6	104.9	98.2	92.8	88.4	84.7	81.6	78.9	76.6	74.6	72.8	71.2	69.8	68.5	67.3	66.3	65.3	64.5	63.6	62.9	62.2	61.6	61.0	60.4	420
440	296.6	212.6	170.6	145.4	128.6	116.6	107.6	100.6	95.0	90.4	86.6	83.4	80.6	78.2	76.1	74.2	72.6	71.1	69.8	68.6	67.5	66.5	65.6	64.8	64.0	63.3	62.6	62.0	61.4	440
460	306.1	219.1	175.6	149.4	132.0	119.6	110.3	103.0	97.2	92.5	88.5	85.2	82.3	79.8	77.6	75.7	74.0	72.5	71.1	69.9	68.7	67.7	66.7	65.9	65.1	64.3	63.6	63.0	62.4	460
480	315.7	225.6	180.5	153.5	135.5	122.6	112.9	105.4	99.4	94.5	90.4	87.0	84.0	81.4	79.2	77.2	75.4	73.8	72.4	71.1	69.9	68.9	67.9	67.0	66.2	65.4	64.7	64.0	63.4	480
500	325.2	232.0	185.5	157.5	138.9	125.6	115.6	107.9	101.6	96.6	92.3	88.7	85.7	83.0	80.7	78.6	76.8	75.2	73.7	72.4	71.2	70.1	69.0	68.1	67.2	66.5	65.7	65.0	64.4	500
600	372.9	264.5	210.3	177.8	156.1	140.6	129.0	119.9	112.7	106.8	101.9	97.7	94.1	91.0	88.3	85.9	83.8	81.9	80.2	78.6	77.2	75.9	74.8	73.7	72.7	71.8	70.9	70.1	69.3	600
700	420.6	296.9	235.1	198.0	173.2	155.6	142.3	132.0	123.8	117.0	111.4	106.7	102.6	99.0	96.0	93.2	90.8	88.6	86.7	84.9	83.3	81.8	80.5	79.3	78.1	77.1	76.1	75.2	74.3	700
800	468.2	329.3	259.9	218.2	190.4	170.6	155.7	144.1	134.8	127.3	121.0	115.6	111.0	107.1	103.6	100.5	97.8	95.4	93.2	91.2	89.4	87.7	86.2	84.8	83.5	82.4	81.3	80.2	79.3	800
900	515.9	361.7	284.7	238.4	207.6	185.6	169.0	156.2	145.9	137.5	130.5	124.6	119.5	115.1	111.2	107.8	104.8	102.1	99.7	97.5	95.4	93.6	92.0	90.4	89.0	87.7	86.4	85.3	84.2	900
1000	563.6	394.2	309.5	258.6	224.7	200.5	182.4	168.3	157.0	147.7	140.0	133.5	127.9	123.1	118.9	115.1	111.8	108.8	106.2	103.7	101.5	99.5	97.7	96.0	94.4	93.0	91.6	90.4	89.2	1000
1100	611.3	426.6	334.3	278.9	241.9	215.5	195.7	180.4	168.0	158.0	149.6	142.5	136.4	131.1	126.5	122.4	118.8	115.6	112.6	110.0	107.6	105.4	103.4	101.6	99.8	98.3	96.8	95.4	94.2	1100
1200	658.9	459.0	359.1	299.1	259.1	230.5	209.1	192.4	179.1	168.2	159.1	151.4	144.8	139.1	134.1	129.7	125.8	122.3	119.1	116.3	113.7	111.3	109.1	107.1	105.3	103.6	102.0	100.5	99.1	1200
1300	706.6	491.4	383.9	319.3	276.3	245.5	222.5	204.5	190.2	178.4	168.7	160.4	153.3	147.1	141.8	137.0	132.8	129.0	125.6	122.5	119.7	117.2	114.9	112.7	110.7	108.9	107.2	105.6	104.1	1300
1400	754.3	523.9	408.6	339.5	293.4	260.5	235.8	216.6	201.2	188.7	178.2	169.3	161.7	155.2	149.4	144.3	139.8	135.7	132.1	128.8	125.8	123.1	120.6	118.3	116.2	114.2	112.4	110.7	109.1	1400
1500	802.0	556.3	433.4	359.7	310.6	275.5	249.2	228.7	212.3	198.9	187.7	178.3	170.2	163.2	157.0	151.8	146.8	142.5	138.6	135.1	131.9	129.0	126.3	123.9	121.6	119.5	117.5	115.7	114.0	1500
Term. 2/	86.800	69.925	61.490	56.430	53.055	50.645	48.835	47.430	46.305	45.385	44.615	43.970	43.410	42.930	42.510	42.135	41.805	41.510	41.240	41.000	40.780	40.580	40.400	40.230	40.075	39.930	39.795	39.670	39.555	Term. 2/
L. H. 3/	.47679	.32424	.24797	.20220	.17169	.14990	.13355	.12084	.11064	.10235	.09542	.08955	.08452	.08016	.07635	.07298	.06999	.06731	.06491	.06273	.06074	.05894	.05728	.05575	.05434	.05304	.05183	.05070	.04965	L. H. 3/

1/ Based on a tare weight of 22.0 tons and a ratio of empty car miles to loaded car miles of 0.341. The Less-carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.
For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.22.
For Cost Level III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.32.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.
See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 9 - Western Trunk Line, incl. No. Ill. but excl. Sou. Mo.

BOX CARS

TABLE 57.—TERRITORY NO. 9 - WESTERN TRUNK LINE, including Northern Illinois but excluding Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																														Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.4	17.0	14.6	12.8	11.4	10.2	9.3	8.5	7.9	7.3	6.8	6.4	6.0	5.7	5.4	5.2	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.2	3.2	3.1	10
20	21.3	17.7	15.2	13.3	11.9	10.7	9.8	9.0	8.3	7.7	7.2	6.8	6.4	6.0	5.7	5.4	5.2	5.0	4.7	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	3.3	20
30	22.2	18.5	15.9	13.9	12.4	11.2	10.2	9.4	8.7	8.1	7.5	7.1	6.7	6.3	6.0	5.7	5.5	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	3.5	30
40	23.0	19.3	16.5	14.5	12.9	11.7	10.6	9.8	9.1	8.4	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.3	5.0	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	3.7	40
50	23.9	20.0	17.2	15.1	13.5	12.2	11.1	10.2	9.4	8.8	8.2	7.7	7.3	6.9	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.1	4.0	3.9	50
60	24.8	20.8	17.9	15.7	14.0	12.6	11.5	10.6	9.8	9.2	8.6	8.1	7.6	7.2	6.9	6.6	6.3	6.0	5.8	5.5	5.3	5.1	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.0	60
70	25.7	21.5	18.5	16.3	14.5	13.1	12.0	11.0	10.2	9.5	8.9	8.4	7.9	7.5	7.2	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.5	4.4	4.2	70
80	26.6	22.3	19.2	16.9	15.0	13.6	12.4	11.4	10.6	9.9	9.3	8.7	8.3	7.8	7.5	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.8	4.7	4.6	4.4	80
90	27.5	23.0	19.8	17.4	15.6	14.1	12.9	11.9	11.0	10.3	9.6	9.1	8.6	8.1	7.7	7.4	7.1	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.8	4.6	90
100	28.4	23.8	20.5	18.0	16.1	14.6	13.3	12.3	11.4	10.6	10.0	9.4	8.9	8.4	8.0	7.7	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	5.0	4.8	100
120	30.1	25.3	21.8	19.2	17.2	15.5	14.2	13.1	12.2	11.4	10.7	10.1	9.5	9.0	8.6	8.2	7.9	7.6	7.3	7.0	6.8	6.6	6.3	6.2	6.0	5.8	5.6	5.5	5.4	5.2	120
140	31.9	26.8	23.1	20.4	18.2	16.5	15.1	13.9	12.9	12.1	11.4	10.7	10.2	9.7	9.2	8.8	8.4	8.1	7.8	7.5	7.3	7.0	6.8	6.6	6.4	6.2	6.1	5.9	5.8	5.6	140
160	33.7	28.3	24.4	21.5	19.3	17.5	16.0	14.8	13.7	12.8	12.1	11.4	10.8	10.3	9.8	9.4	9.0	8.6	8.3	8.0	7.7	7.5	7.3	7.0	6.8	6.7	6.5	6.3	6.2	6.0	160
180	35.5	29.8	25.7	22.7	20.3	18.4	16.9	15.6	14.5	13.6	12.8	12.0	11.4	10.9	10.4	9.9	9.5	9.1	8.8	8.5	8.2	8.0	7.7	7.5	7.3	7.1	6.9	6.7	6.6	6.4	180
200	37.2	31.3	27.0	23.9	21.4	19.4	17.8	16.4	15.3	14.3	13.5	12.7	12.1	11.5	10.9	10.5	10.1	9.7	9.3	9.0	8.7	8.4	8.2	7.9	7.7	7.5	7.3	7.1	7.0	6.8	200
220	39.0	32.8	28.4	25.0	22.4	20.4	18.7	17.3	16.1	15.0	14.1	13.4	12.7	12.1	11.5	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.4	8.1	7.9	7.7	7.5	7.4	7.2	220
240	40.8	34.3	29.7	26.2	23.5	21.3	19.6	18.1	16.8	15.8	14.8	14.0	13.3	12.7	12.1	11.6	11.1	10.7	10.3	10.0	9.7	9.4	9.1	8.8	8.6	8.4	8.1	8.0	7.8	7.6	240
260	42.6	35.8	31.0	27.4	24.5	22.2	20.5	18.9	17.6	16.5	15.5	14.7	13.9	13.3	12.7	12.2	11.7	11.2	10.8	10.5	10.1	9.8	9.5	9.3	9.0	8.8	8.6	8.4	8.2	8.0	260
280	44.3	37.3	32.3	28.5	25.6	23.3	21.3	19.7	18.4	17.2	16.2	15.4	14.6	13.9	13.3	12.7	12.2	11.8	11.3	11.0	10.6	10.3	10.0	9.7	9.5	9.2	9.0	8.8	8.6	8.4	280
300	46.1	38.8	33.6	29.7	26.7	24.2	22.2	20.6	19.2	18.0	16.9	16.0	15.2	14.5	13.9	13.3	12.8	12.3	11.9	11.5	11.1	10.8	10.4	10.2	9.9	9.6	9.4	9.2	9.0	8.8	300
320	47.9	40.3	34.9	30.9	27.7	25.2	23.1	21.4	20.0	18.7	17.6	16.7	15.8	15.1	14.4	13.8	13.3	12.8	12.4	12.0	11.6	11.2	10.9	10.6	10.3	10.1	9.8	9.6	9.4	9.2	320
340	49.7	41.8	36.2	32.0	28.8	26.2	24.0	22.2	20.7	19.4	18.3	17.3	16.5	15.7	15.0	14.4	13.8	13.3	12.9	12.4	12.1	11.7	11.4	11.0	10.8	10.5	10.2	10.0	9.8	9.6	340
360	51.4	43.3	37.5	33.2	29.8	27.1	24.9	23.1	21.5	20.2	19.0	18.0	17.1	16.3	15.6	15.0	14.4	13.9	13.4	12.9	12.5	12.2	11.8	11.5	11.2	10.9	10.7	10.4	10.2	10.0	360
380	53.2	44.8	38.9	34.4	30.9	28.1	25.8	23.9	22.3	20.9	19.7	18.7	17.7	16.9	16.2	15.5	14.9	14.4	13.9	13.4	13.0	12.6	12.3	11.9	11.6	11.3	11.1	10.8	10.6	10.4	380
400	55.0	46.3	40.2	35.5	31.9	29.1	26.7	24.7	23.1	21.6	20.4	19.3	18.4	17.5	16.8	16.1	15.5	14.9	14.4	13.9	13.5	13.1	12.7	12.4	12.1	11.8	11.5	11.2	11.0	10.7	400
420	56.8	47.8	41.5	36.7	33.0	30.0	27.6	25.6	23.8	22.4	21.1	20.0	19.0	18.1	17.4	16.6	16.0	15.4	14.9	14.4	14.0	13.6	13.2	12.8	12.5	12.2	11.9	11.6	11.4	11.1	420
440	58.5	49.4	42.8	37.9	34.0	31.0	28.5	26.4	24.6	23.1	21.8	20.7	19.6	18.7	17.9	17.2	16.6	16.0	15.4	14.9	14.5	14.0	13.6	13.3	12.9	12.6	12.3	12.0	11.8	11.5	440
460	60.3	50.9	44.1	39.0	35.1	31.9	29.4	27.2	25.4	23.8	22.5	21.3	20.3	19.3	18.5	17.8	17.1	16.5	15.9	15.4	14.9	14.5	14.1	13.7	13.4	13.0	12.7	12.5	12.2	11.9	460
480	62.1	52.4	45.4	40.2	36.2	32.9	30.3	28.1	26.2	24.6	23.2	22.0	20.9	19.9	19.1	18.3	17.6	17.0	16.4	15.9	15.4	15.0	14.5	14.2	13.8	13.5	13.2	12.9	12.6	12.3	480
500	63.9	53.9	46.7	41.4	37.2	33.9	31.2	28.9	27.0	25.3	23.9	22.6	21.5	20.6	19.7	18.9	18.2	17.5	16.9	16.4	15.9	15.4	15.0	14.6	14.2	13.9	13.6	13.3	13.0	12.7	500
600	72.7	61.4	53.3	47.2	42.5	38.7	35.6	33.0	30.9	29.0	27.4	25.9	24.7	23.6	22.6	21.7	20.9	20.1	19.5	18.9	18.3	17.8	17.3	16.8	16.4	16.0	15.7	15.3	15.0	14.7	600
700	81.6	68.9	59.9	53.1	47.8	43.5	40.1	37.2	34.7	32.7	30.8	29.3	27.9	26.6	25.5	24.5	23.6	22.8	22.0	21.3	20.7	20.1	19.6	19.1	18.6	18.2	17.7	17.4	17.0	16.7	700
800	90.5	76.4	66.4	58.9	53.0	48.4	44.5	41.3	38.6	36.3	34.3	32.6	31.0	29.6	28.4	27.3	26.3	25.4	24.6	23.8	23.1	22.4	21.8	21.3	20.8	20.3	19.8	19.4	19.0	18.6	800
900	99.4	84.0	73.0	64.7	58.3	53.2	49.0	45.5	42.5	40.0	37.8	35.9	34.2	32.7	31.3	30.1	29.0	28.0	27.1	26.3	25.5	24.8	24.1	23.5	22.9	22.4	21.9	21.4	21.0	20.6	900
1000	108.2	91.5	79.5	70.6	63.6	58.0	53.5	49.6	46.4	43.7	41.3	39.2	37.3	35.7	34.2	32.9	31.7	30.6	29.6	28.7	27.9	27.1	26.4	25.7	25.1	24.5	24.0	23.5	23.0	22.6	1000
1100	117.1	99.0	86.1	76.4	68.9	62.8	57.9	53.8	50.3	47.3	44.8	42.5	40.5	38.7	37.1	35.7	34.4	33.2	32.2	31.2	30.3	29.4	28.7	28.0	27.3	26.7	26.1	25.5	25.0	24.5	1100
1200	126.0	106.5	92.7	82.2	74.1	67.7	62.4	58.0	54.2	51.0	48.2	45.8	43.7	41.8	40.1	38.5	37.1	35.9	34.7	33.7	32.7	31.8	31.0	30.2	29.5	28.8	28.2	27.6	27.0	26.5	1200
1300	134.9	114.1	99.2	88.1	79.4	72.5	66.8	62.1	58.1	54.7	51.7	49.1	46.8	44.8	43.0	41.3	39.8	38.5	37.3	36.1	35.1	34.1	33.2	32.4	31.6	30.9	30.3	29.6	29.0	28.5	1300
1400	143.7	121.6	105.8	93.9	84.7	77.3	71.3	66.3	62.0	58.4	55.2	52.4	50.0	47.8	45.9	44.1	42.5	41.1	39.8	38.6	37.5	36.5	35.5	34.6	33.8	33.1	32.3	31.7	31.0	30.5	1400
1500	152.6	129.1	112.3	99.8	90.0	82.2	75.7	70.4	65.9	62.0	58.7	55.7	53.1	50.8	48.8	46.9	45.2	43.7	42.3	41.1	39.9	38.8	37.8	36.9	36.0	35.2	34.4	33.7	33.0	32.4	1500
Term. 2/	19.490	16.242	13.921	12.181	10.828	9.745	8.859	8.121	7.496	6.961	6.497	6.091	5.732	5.414	5.129	4.873	4.640	4.430	4.237	4.060	3.898	3.748	3.609	3.480	3.360	3.248	3.144	3.045	2.953	2.866	Term. 2/
L. H. 3/	.088740	.075250	.065614	.058388	.052767	.048270	.044591	.041525	.038931	.036707	.034780	.033094	.031606	.030283	.029100	.028035	.027071	.026195	.025396	.024663	.023988	.023365	.022789	.022254	.021755	.021290	.020855	.020447	.020064	.019703	L. H. 3/

1/ Based on a tare weight of 22.0 tons and a ratio of empty car miles to loaded car miles of 0.341. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.39.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.74.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 57 (Concluded).—TERRITORY NO. 9 - WESTERN TRUNK LINE, including Northern Illinois but excluding Southern Missouri

Territory No. 9 - Western Trunk Lines, incl. No. Ill. but excl. Sou. Mo.

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	10
20	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	20
30	3.4	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	30
40	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	40
50	3.8	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	50
60	3.9	3.8	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	60
70	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	70
80	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.7	80
90	4.4	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	90
100	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	100
120	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	120
140	5.5	5.4	5.3	5.1	5.0	4.9	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	140
160	5.9	5.8	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	160
180	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	180
200	6.7	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	200
220	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	220
240	7.4	7.3	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	5.0	4.9	240
260	7.8	7.7	7.5	7.4	7.2	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.5	5.4	5.4	5.3	5.2	5.2	260
280	8.2	8.0	7.9	7.7	7.6	7.5	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	280
300	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.9	5.8	5.8	300
320	9.0	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.3	6.2	6.2	6.1	6.0	320
340	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.6	6.5	6.4	6.4	6.3	6.3	340
360	9.8	9.6	9.4	9.2	9.0	8.9	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.9	6.8	6.7	6.7	6.6	360
380	10.1	9.9	9.8	9.6	9.4	9.2	9.1	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.2	7.1	7.0	7.0	6.9	380
400	10.5	10.3	10.1	9.9	9.8	9.6	9.4	9.3	9.2	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.2	400
420	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.6	9.5	9.4	9.2	9.1	9.0	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.5	420
440	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.6	9.4	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7	440
460	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.9	9.8	9.6	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.0	460
480	12.1	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.5	10.4	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.2	9.1	9.0	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	480
500	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.7	8.6	500
600	14.4	14.1	13.9	13.6	13.4	13.2	13.0	12.8	12.6	12.4	12.2	12.1	11.9	11.8	11.6	11.5	11.4	11.2	11.1	11.0	10.9	10.8	10.7	10.5	10.4	10.4	10.3	10.2	10.1	10.0	600
700	16.3	16.0	15.8	15.5	15.2	15.0	14.7	14.5	14.3	14.1	13.9	13.7	13.6	13.4	13.2	13.1	12.9	12.8	12.6	12.5	12.4	12.3	12.1	12.0	11.9	11.8	11.7	11.6	11.5	11.4	700
800	18.3	17.9	17.6	17.3	17.0	16.8	16.5	16.3	16.0	15.8	15.6	15.4	15.2	15.0	14.8	14.7	14.5	14.3	14.2	14.0	13.9	13.8	13.6	13.5	13.4	13.3	13.1	13.0	12.9	12.8	800
900	20.2	19.8	19.5	19.2	18.9	18.6	18.3	18.0	17.8	17.5	17.3	17.1	16.8	16.6	16.4	16.3	16.1	15.9	15.7	15.6	15.4	15.3	15.1	15.0	14.8	14.7	14.6	14.5	14.3	14.2	900
1000	22.1	21.7	21.4	21.0	20.7	20.4	20.0	19.8	19.5	19.2	19.0	18.7	18.5	18.3	18.0	17.8	17.6	17.5	17.3	17.1	16.9	16.8	16.6	16.5	16.3	16.2	16.0	15.9	15.8	15.6	1000
1100	24.1	23.7	23.2	22.9	22.5	22.1	21.8	21.5	21.2	20.9	20.6	20.4	20.1	19.9	19.7	19.4	19.2	19.0	18.8	18.6	18.4	18.3	18.1	17.9	17.8	17.6	17.5	17.3	17.2	17.1	1100
1200	26.0	25.6	25.1	24.7	24.3	23.9	23.6	23.2	22.9	22.6	22.3	22.0	21.8	21.5	21.3	21.0	20.8	20.6	20.4	20.2	20.0	19.8	19.6	19.4	19.2	19.1	18.9	18.8	18.6	18.5	1200
1300	28.0	27.5	27.0	26.5	26.1	25.7	25.3	25.0	24.6	24.3	24.0	23.7	23.4	23.1	22.9	22.6	22.4	22.1	21.9	21.7	21.5	21.3	21.1	20.9	20.7	20.5	20.4	20.2	20.0	19.9	1300
1400	29.9	29.4	28.9	28.4	27.9	27.5	27.1	26.7	26.4	26.0	25.7	25.4	25.0	24.8	24.5	24.2	23.9	23.7	23.4	23.2	23.0	22.8	22.6	22.4	22.2	22.0	21.8	21.6	21.5	21.3	1400
1500	31.8	31.3	30.7	30.2	29.8	29.3	28.9	28.5	28.1	27.7	27.4	27.0	26.7	26.4	26.1	25.8	25.5	25.2	25.0	24.7	24.5	24.3	24.1	23.8	23.6	23.4	23.2	23.1	22.9	22.7	1500
Term. 2/	2.784	2.707	2.634	2.564	2.499	2.436	2.377	2.320	2.266	2.215	2.166	2.118	2.073	2.030	1.989	1.949	1.911	1.874	1.839	1.805	1.772	1.740	1.710	1.680	1.652	1.624	1.598	1.572	1.547	1.523	Term. 2/
L. H. 3/	.019363	.019042	.018738	.018450	.018177	.017918	.017671	.017436	.017212	.016998	.016793	.016598	.016411	.016231	.016059	.015894	.015735	.015583	.015436	.015294	.015158	.015027	.014900	.014778	.014659	.014545	.014434	.014327	.014224	.014123	L. H. 3/

1/ Based on a tare weight of 22.0 tons and a ratio of empty car miles to loaded car miles of 0.341. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.59.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.74.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 9 - Western Trunk Line, incl. No. Ill. but excl. Sou. Mo.

FLAT CARS

TABLE 58.--TERRITORY NO. 9 - WESTERN TRUNK LINE, including Northern Illinois but excluding Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.5	17.1	14.7	12.9	11.4	10.3	9.4	8.6	7.9	7.4	6.9	6.5	6.1	5.8	5.5	5.2	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	10
20	21.5	18.0	15.4	13.5	12.0	10.9	9.9	9.1	8.4	7.8	7.3	6.8	6.4	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	20
30	22.6	18.9	16.2	14.2	12.6	11.4	10.4	9.5	8.8	8.2	7.7	7.2	6.8	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.8	3.7	3.6	3.5	30
40	23.6	19.7	16.9	14.9	13.3	12.0	10.9	10.0	9.3	8.6	8.1	7.6	7.2	6.8	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.8	3.7	40
50	24.6	20.6	17.7	15.5	13.9	12.5	11.4	10.5	9.7	9.0	8.5	8.0	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.4	5.2	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.1	4.0	50
60	25.7	21.5	18.5	16.2	14.5	13.1	11.9	11.0	10.2	9.5	8.9	8.3	7.9	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.5	4.4	4.3	4.2	60
70	26.7	22.3	19.2	16.9	15.1	13.6	12.4	11.4	10.6	9.9	9.3	8.7	8.2	7.8	7.4	7.1	6.8	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.4	70
80	27.7	23.2	20.0	17.6	15.7	14.2	12.9	11.9	11.0	10.3	9.7	9.1	8.6	8.2	7.8	7.4	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.5	5.3	5.1	5.0	4.9	4.7	4.6	80
90	28.8	24.1	20.7	18.2	16.3	14.7	13.5	12.4	11.5	10.7	10.1	9.5	9.0	8.5	8.1	7.7	7.4	7.1	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	5.0	4.8	90
100	29.8	24.9	21.5	18.9	16.9	15.3	14.0	12.9	11.9	11.1	10.4	9.8	9.3	8.8	8.4	8.0	7.7	7.4	7.1	6.8	6.6	6.4	6.1	6.0	5.8	5.6	5.5	5.3	5.2	5.0	100
120	31.8	26.7	23.0	20.2	18.1	16.4	15.0	13.8	12.8	12.0	11.2	10.6	10.0	9.5	9.1	8.7	8.3	8.0	7.7	7.4	7.1	6.9	6.7	6.5	6.3	6.1	5.9	5.8	5.6	5.5	120
140	33.9	28.4	24.5	21.6	19.3	17.5	16.0	14.8	13.7	12.8	12.0	11.3	10.7	10.2	9.7	9.3	8.9	8.5	8.2	7.9	7.7	7.4	7.2	6.9	6.7	6.6	6.4	6.2	6.1	5.9	140
160	36.0	30.2	26.0	22.9	20.5	18.6	17.0	15.7	14.6	13.6	12.8	12.1	11.5	10.9	10.4	9.9	9.5	9.1	8.8	8.5	8.2	7.9	7.7	7.4	7.2	7.0	6.8	6.7	6.5	6.4	160
180	38.0	31.9	27.6	24.3	21.7	19.7	18.0	16.7	15.5	14.5	13.6	12.8	12.2	11.6	11.0	10.6	10.1	9.7	9.4	9.0	8.7	8.4	8.2	7.9	7.7	7.5	7.3	7.1	7.0	6.8	180
200	40.1	33.7	29.1	25.6	23.0	20.8	19.1	17.6	16.4	15.3	14.4	13.6	12.9	12.3	11.7	11.2	10.7	10.3	9.9	9.6	9.3	9.0	8.7	8.4	8.2	8.0	7.8	7.6	7.4	7.2	200
220	42.1	35.4	30.6	27.0	24.2	21.9	20.1	18.6	17.3	16.1	15.2	14.3	13.6	12.9	12.4	11.8	11.3	10.9	10.5	10.1	9.8	9.5	9.2	8.9	8.7	8.5	8.2	8.0	7.8	7.7	220
240	44.2	37.1	32.1	28.3	25.4	23.0	21.1	19.5	18.1	17.0	16.0	15.1	14.3	13.6	13.0	12.5	11.9	11.5	11.1	10.7	10.3	10.0	9.7	9.4	9.2	8.9	8.7	8.5	8.3	8.1	240
260	46.2	38.9	33.5	29.7	26.6	24.1	22.1	20.5	19.0	17.8	16.8	15.8	15.0	14.3	13.7	13.1	12.6	12.1	11.6	11.2	10.9	10.5	10.2	9.9	9.7	9.4	9.2	8.9	8.7	8.5	260
280	48.3	40.6	35.1	31.0	27.8	25.2	23.1	21.4	19.9	18.7	17.6	16.6	15.7	15.0	14.3	13.7	13.2	12.7	12.2	11.8	11.4	11.1	10.7	10.4	10.1	9.9	9.6	9.4	9.2	9.0	280
300	50.4	42.4	36.6	32.4	29.0	26.3	24.2	22.3	20.8	19.5	18.3	17.3	16.5	15.7	15.0	14.3	13.8	13.3	12.8	12.3	11.9	11.6	11.2	10.9	10.6	10.3	10.1	9.8	9.6	9.4	300
320	52.4	44.1	38.2	33.7	30.2	27.5	25.2	23.3	21.7	20.3	19.1	18.1	17.2	16.4	15.6	15.0	14.4	13.8	13.3	12.9	12.5	12.1	11.7	11.4	11.1	10.8	10.5	10.3	10.1	9.8	320
340	54.5	45.8	39.7	35.0	31.4	28.6	26.2	24.2	22.6	21.2	19.9	18.8	17.9	17.0	16.3	15.6	15.0	14.4	13.9	13.4	13.0	12.6	12.2	11.9	11.6	11.3	11.0	10.7	10.5	10.3	340
360	56.5	47.6	41.2	36.4	32.7	29.7	27.2	25.2	23.5	22.0	20.7	19.6	18.6	17.7	16.9	16.2	15.6	15.0	14.5	14.0	13.6	13.1	12.8	12.4	12.1	11.8	11.5	11.2	10.9	10.7	360
380	58.6	49.3	42.7	37.7	33.9	30.8	28.2	26.1	24.4	22.8	21.5	20.3	19.3	18.4	17.6	16.9	16.2	15.6	15.1	14.6	14.1	13.7	13.3	12.9	12.6	12.2	11.9	11.7	11.4	11.1	380
400	60.6	51.1	44.2	39.1	35.1	31.9	29.3	27.1	25.2	23.7	22.3	21.1	20.0	19.1	18.3	17.5	16.8	16.2	15.6	15.1	14.6	14.2	13.8	13.4	13.0	12.7	12.4	12.1	11.8	11.6	400
420	62.7	52.8	45.7	40.4	36.3	33.0	30.3	28.0	26.1	24.5	23.1	21.8	20.8	19.8	18.9	18.1	17.4	16.8	16.2	15.7	15.2	14.7	14.3	13.9	13.5	13.2	12.9	12.6	12.3	12.0	420
440	64.8	54.5	47.2	41.8	37.5	34.1	31.3	29.0	27.0	25.3	23.9	22.8	21.5	20.5	19.6	18.8	18.0	17.4	16.8	16.2	15.7	15.2	14.8	14.4	14.0	13.7	13.3	13.0	12.7	12.5	440
460	66.8	56.3	48.8	43.1	38.7	35.2	32.3	29.9	27.9	26.2	24.7	23.3	22.2	21.2	20.2	19.4	18.6	18.0	17.3	16.8	16.2	15.7	15.3	14.9	14.5	14.1	13.8	13.5	13.2	12.9	460
480	68.9	58.0	50.3	44.5	39.9	36.3	33.4	30.9	28.8	27.0	25.5	24.1	22.9	21.8	20.9	20.0	19.3	18.5	17.9	17.3	16.8	16.3	15.8	15.4	15.0	14.6	14.2	13.9	13.6	13.3	480
500	70.9	59.8	51.8	45.8	41.1	37.4	34.4	31.8	29.7	27.8	26.2	24.8	23.6	22.5	21.5	20.7	19.9	19.1	18.5	17.9	17.3	16.8	16.3	15.9	15.5	15.1	14.7	14.4	14.1	13.8	500
600	81.2	68.5	59.4	52.5	47.2	43.0	39.5	36.6	34.1	32.0	30.2	28.6	27.2	25.9	24.8	23.8	22.9	22.1	21.3	20.6	20.0	19.4	18.9	18.3	17.9	17.4	17.0	16.6	16.3	15.9	600
700	91.5	77.2	66.9	59.2	53.3	48.5	44.6	41.3	38.6	36.2	34.1	32.4	30.8	29.4	28.1	27.0	25.9	25.0	24.2	23.4	22.7	22.0	21.4	20.8	20.3	19.8	19.3	18.9	18.5	18.1	700
800	101.8	85.9	74.5	66.0	59.3	54.0	49.7	46.1	43.0	40.4	38.1	36.1	34.3	32.8	31.4	30.1	29.0	28.0	27.0	26.1	25.4	24.6	23.9	23.3	22.7	22.2	21.7	21.2	20.7	20.3	800
900	112.1	94.6	82.1	72.7	65.4	59.6	54.8	50.8	47.4	44.5	42.0	39.9	37.9	36.2	34.7	33.3	32.0	30.9	29.9	28.9	28.0	27.2	26.5	25.8	25.1	24.5	24.0	23.4	22.9	22.5	900
1000	122.4	103.3	89.6	79.4	71.5	65.1	59.9	55.5	51.9	48.7	46.0	43.6	41.5	39.6	38.0	36.4	35.1	33.8	32.7	31.7	30.7	29.8	29.0	28.3	27.6	26.9	26.3	25.7	25.2	24.7	1000
1100	132.7	112.0	97.2	86.1	77.5	70.6	65.0	60.3	56.3	52.9	49.9	47.4	45.1	43.0	41.2	39.6	38.1	36.8	35.6	34.4	33.4	32.4	31.6	30.7	30.0	29.3	28.6	28.0	27.4	26.8	1100
1200	143.0	120.7	104.8	92.9	83.6	76.2	70.1	65.0	60.7	57.1	53.9	51.1	48.7	46.5	44.5	42.8	41.2	39.7	38.4	37.2	36.1	35.1	34.1	33.2	32.4	31.6	30.9	30.2	29.6	29.0	1200
1300	153.2	129.4	112.4	99.6	89.6	81.7	75.2	69.8	65.2	61.3	57.8	54.9	52.2	49.9	47.8	45.9	44.2	42.7	41.3	40.0	38.8	37.7	36.6	35.7	34.8	34.0	33.2	32.5	31.8	31.2	1300
1400	163.5	138.1	119.9	106.3	95.7	87.2	80.3	74.5	69.6	65.4	61.8	58.6	55.8	53.3	51.1	49.1	47.3	45.6	44.1	42.7	41.4	40.3	39.2	38.2	37.2	36.4	35.5	34.8	34.0	33.4	1400
1500	173.8	146.5	127.5	113.0	101.8	92.8	85.4	79.3	74.1	69.6	65.7	62.4	59.4	56.7	54.4	52.2	50.3	48.5	46.9	45.5	44.1	42.9	41.7	40.7	39.7	38.7	37.8	37.0	36.3	35.5	1500
Term. 2/	19.490	16.242	13.921	12.181	10.828	9.745	8.859	8.121	7.496	6.961	6.497	6.091	5.732	5.414	5.129	4.873	4.640	4.430	4.237	4.060	3.898	3.748	3.609	3.480	3.360	3.248	3.144	3.045	2.953	2.866	Term. 2/
L. H. 3/	.102890	.087042	.075721	.067231	.060628	.055345	.051023	.047421	.044373	.041761	.039497	.037516	.035768	.034214	.032824	.031573	.030440	.029411	.028472	.027610	.026818	.026087	.025409	.024780	.024195	.023648	.023137	.022658	.022208	.021784	L. H. 3/

1/ Based on a tare weight of 19.1 tons and a ratio of empty car miles to loaded car miles of 0.703. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.59.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.74.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 58 (Concluded).--TERRITORY NO. 9 - WESTERN TRUNK LINE, including Northern Illinois but excluding Southern Missouri

Territory No. 9 - Western Trunk Line, incl. No. Ill. but excl. Sou. Mo.

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	10
20	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	20
30	3.4	3.3	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	30
40	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	40
50	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	50
60	4.1	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	60
70	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.6	70
80	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	80
90	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	90
100	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	100
120	5.4	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.4	120
140	5.8	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.7	140
160	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	160
180	6.6	6.5	6.4	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	180
200	7.1	6.9	6.8	6.6	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	4.6	200
220	7.5	7.3	7.2	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	5.0	4.9	4.9	220
240	7.9	7.7	7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.5	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	240
260	8.3	8.2	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.7	5.6	5.5	5.5	260
280	8.8	8.6	8.4	8.3	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.8	280
300	9.2	9.0	8.8	8.7	8.5	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	6.2	6.1	300
320	9.6	9.4	9.2	9.1	8.9	8.7	8.6	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	320
340	10.1	9.9	9.7	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.8	6.7	340
360	10.5	10.3	10.1	9.9	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.1	7.0	360
380	10.9	10.7	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.5	7.5	7.4	7.3	380
400	11.3	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.6	400
420	11.8	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.0	9.9	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.0	7.9	420
440	12.2	12.0	11.7	11.5	11.3	11.1	10.9	10.7	10.6	10.4	10.2	10.1	10.0	9.8	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.5	8.4	8.3	8.2	440
460	12.6	12.4	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.8	10.6	10.5	10.3	10.2	10.0	9.9	9.8	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.9	8.8	8.7	8.6	8.5	460
480	13.0	12.8	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	480
500	13.5	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.2	11.0	10.9	10.7	10.6	10.5	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	500
600	15.6	15.3	15.0	14.7	14.5	14.2	14.0	13.8	13.6	13.4	13.2	13.0	12.8	12.7	12.5	12.3	12.2	12.0	11.9	11.8	11.6	11.5	11.4	11.3	11.2	11.1	11.0	10.9	10.8	10.7	600
700	17.8	17.4	17.1	16.8	16.5	16.2	16.0	15.7	15.5	15.2	15.0	14.8	14.6	14.4	14.2	14.1	13.9	13.7	13.6	13.4	13.3	13.1	13.0	12.9	12.8	12.6	12.5	12.4	12.3	12.2	700
800	19.9	19.5	19.2	18.8	18.5	18.2	17.9	17.6	17.4	17.1	16.9	16.6	16.4	16.2	16.0	15.8	15.6	15.4	15.2	15.1	14.9	14.8	14.6	14.5	14.3	14.2	14.1	13.9	13.8	13.7	800
900	22.0	21.6	21.2	20.8	20.5	20.2	19.8	19.5	19.2	19.0	18.7	18.4	18.2	18.0	17.7	17.5	17.3	17.1	16.9	16.7	16.6	16.4	16.2	16.1	15.9	15.8	15.6	15.5	15.4	15.2	900
1000	24.2	23.7	23.3	22.9	22.5	22.1	21.8	21.4	21.1	20.8	20.5	20.3	20.0	19.7	19.5	19.3	19.0	18.8	18.6	18.4	18.2	18.0	17.9	17.7	17.5	17.3	17.2	17.0	16.9	16.8	1000
1100	26.3	25.8	25.3	24.9	24.5	24.1	23.7	23.4	23.0	22.7	22.4	22.1	21.8	21.5	21.2	21.0	20.7	20.5	20.3	20.1	19.9	19.7	19.5	19.3	19.1	18.9	18.8	18.6	18.4	18.3	1100
1200	28.4	27.9	27.4	26.9	26.5	26.1	25.7	25.3	24.9	24.5	24.2	23.9	23.6	23.3	23.0	22.7	22.5	22.2	22.0	21.7	21.5	21.3	21.1	20.9	20.7	20.5	20.3	20.1	20.0	19.8	1200
1300	30.6	30.0	29.5	29.0	28.5	28.0	27.6	27.2	26.8	26.4	26.0	25.7	25.4	25.0	24.7	24.5	24.2	23.9	23.6	23.4	23.2	22.9	22.7	22.5	22.3	22.1	21.9	21.7	21.5	12.3	1300
1400	32.7	32.1	31.5	31.0	30.5	30.0	29.5	29.1	28.7	28.3	27.9	27.5	27.2	26.8	26.5	26.2	25.9	25.6	25.3	25.1	24.8	24.5	24.3	24.1	23.9	23.6	23.4	23.2	23.0	22.8	1400
1500	34.9	34.2	33.6	33.0	32.5	32.0	31.5	31.0	30.6	30.1	29.7	29.3	28.9	28.6	28.2	27.9	27.6	27.3	27.0	26.7	26.4	26.2	25.9	25.7	25.4	25.2	25.0	24.8	24.6	24.4	1500
Term. 2/	2.784	2.707	2.634	2.564	2.499	2.436	2.377	2.320	2.266	2.215	2.166	2.119	2.073	2.030	1.989	1.949	1.911	1.874	1.839	1.805	1.772	1.740	1.710	1.680	1.652	1.624	1.598	1.572	1.547	1.523	Term. 2/
L. H. 3/	.021384	.021007	.020650	.020312	.019991	.019686	.019396	.019120	.018857	.018606	.018366	.018136	.017916	.017705	.017503	.017309	.017123	.016943	.016771	.016605	.016445	.016290	.016141	.015997	.015858	.015724	.015594	.015469	.015347	.015229	L. H. 3/

1/ Based on a tare weight of 19.1 tons and a ratio of empty car miles to loaded car miles of 0.703. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.74.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 9 - Western Trunk Line, incl. No. Ill. but excl. Sou. Mo.

GONDOLA AND HOPPER CARS

TABLE 99.--TERRITORY NO. 9 - WESTERN TRUNK LINE, including Northern Illinois but excluding Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.6	17.2	14.8	12.9	11.5	10.4	9.4	8.6	8.0	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.8	4.5	4.4	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	10
20	21.8	18.2	15.6	13.7	12.2	11.0	10.0	9.2	8.5	7.9	7.4	6.9	6.5	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	20
30	23.0	19.2	16.5	14.4	12.9	11.6	10.6	9.7	9.0	8.3	7.8	7.3	6.9	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.2	4.0	3.9	3.8	3.7	3.6	30
40	24.1	20.1	17.3	15.2	13.5	12.2	11.1	10.2	9.5	8.8	8.2	7.7	7.3	6.9	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.0	3.9	3.8	40
50	25.3	21.1	18.2	15.9	14.2	12.8	11.7	10.8	10.0	9.3	8.7	8.2	7.7	7.3	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.0	50
60	26.4	22.1	19.0	16.7	14.9	13.4	12.3	11.3	10.4	9.7	9.1	8.6	8.1	7.7	7.3	7.0	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.7	4.5	4.4	4.3	60
70	27.6	23.1	19.8	17.4	15.6	14.1	12.8	11.8	10.9	10.2	9.6	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.4	6.2	6.0	5.7	5.5	5.4	5.2	5.0	4.9	4.8	4.6	4.5	70
80	28.7	24.0	20.7	18.2	16.2	14.7	13.4	12.3	11.4	10.7	10.0	9.4	8.9	8.4	8.0	7.6	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.0	4.9	4.8	80
90	29.9	25.0	21.5	18.9	16.9	15.3	14.0	12.9	11.9	11.1	10.4	9.8	9.3	8.8	8.4	8.0	7.6	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.6	5.4	5.3	5.1	5.0	90
100	31.0	26.0	22.4	19.7	17.6	15.9	14.5	13.4	12.4	11.6	10.9	10.2	9.7	9.2	8.7	8.3	8.0	7.7	7.4	7.1	6.8	6.6	6.4	6.2	6.0	5.8	5.7	5.5	5.4	5.2	100
120	33.3	27.9	24.1	21.2	18.9	17.1	15.7	14.4	13.4	12.5	11.7	11.1	10.5	9.9	9.5	9.0	8.7	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.2	6.0	5.8	5.7	120
140	35.6	29.9	25.8	22.7	20.3	18.4	16.8	15.5	14.4	13.4	12.6	11.9	11.3	10.7	10.2	9.7	9.3	8.9	8.6	8.3	8.0	7.7	7.5	7.3	7.0	6.9	6.7	6.5	6.3	6.2	140
160	38.0	31.8	27.5	24.2	21.6	19.6	17.9	16.5	15.4	14.4	13.5	12.7	12.0	11.4	10.9	10.4	10.0	9.6	9.2	8.9	8.6	8.3	8.0	7.8	7.6	7.4	7.2	7.0	6.8	6.6	160
180	40.3	33.8	29.2	25.7	23.0	20.8	19.1	17.6	16.3	15.3	14.4	13.5	12.8	12.2	11.6	11.1	10.7	10.2	9.9	9.5	9.2	8.9	8.6	8.3	8.1	7.9	7.7	7.5	7.3	7.1	180
200	42.6	35.7	30.9	27.2	24.3	22.1	20.2	18.6	17.3	16.2	15.2	14.4	13.6	13.0	12.4	11.8	11.3	10.9	10.5	10.1	9.8	9.4	9.2	8.9	8.6	8.4	8.2	8.0	7.8	7.6	200
220	44.9	37.7	32.5	28.7	25.7	23.3	21.3	19.7	18.3	17.1	16.1	15.2	14.4	13.7	13.1	12.5	12.0	11.5	11.1	10.7	10.3	10.0	9.7	9.4	9.2	8.9	8.7	8.5	8.3	8.1	220
240	47.2	39.6	34.2	30.2	27.0	24.5	22.5	20.8	19.3	18.1	17.0	16.0	15.2	14.5	13.8	13.2	12.7	12.2	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.4	9.2	9.0	8.7	8.5	240
260	49.5	41.6	35.9	31.7	28.4	25.8	23.6	21.8	20.3	19.0	17.9	16.9	16.0	15.2	14.5	13.9	13.3	12.8	12.3	11.9	11.5	11.2	10.8	10.5	10.2	9.9	9.7	9.4	9.2	9.0	260
280	51.8	43.5	37.6	33.2	29.7	27.0	24.7	22.9	21.3	19.9	18.7	17.7	16.8	16.0	15.2	14.6	14.0	13.5	13.0	12.5	12.1	11.7	11.4	11.0	10.7	10.5	10.2	9.9	9.7	9.5	280
300	54.1	45.5	39.3	34.7	31.1	28.2	25.9	23.9	22.3	20.8	19.6	18.5	17.6	16.7	16.0	15.3	14.7	14.1	13.6	13.1	12.7	12.3	11.9	11.6	11.3	11.0	10.7	10.4	10.2	10.0	300
320	56.4	47.4	41.0	36.2	32.5	29.5	27.0	25.0	23.2	21.8	20.5	19.3	18.4	17.5	16.7	16.0	15.3	14.8	14.2	13.7	13.3	12.9	12.5	12.1	11.8	11.5	11.2	10.9	10.7	10.4	320
340	58.7	49.4	42.7	37.7	33.8	30.7	28.1	26.0	24.2	22.7	21.3	20.2	19.1	18.2	17.4	16.7	16.0	15.4	14.8	14.3	13.9	13.4	13.0	12.7	12.3	12.0	11.7	11.4	11.1	10.9	340
360	61.0	51.3	44.4	39.2	35.2	31.9	29.3	27.1	25.2	23.6	22.2	21.0	20.0	19.0	18.1	17.4	16.7	16.0	15.5	14.9	14.5	14.0	13.6	13.2	12.8	12.5	12.2	11.9	11.6	11.4	360
380	63.3	53.3	46.1	40.7	36.5	33.2	30.4	28.1	26.2	24.5	23.1	21.8	20.7	19.7	18.9	18.1	17.3	16.7	16.1	15.5	15.0	14.6	14.1	13.7	13.4	13.0	12.7	12.4	12.1	11.8	380
400	65.7	55.2	47.8	42.2	37.9	34.4	31.5	29.2	27.2	25.5	24.0	22.7	21.5	20.5	19.6	18.8	18.0	17.3	16.7	16.1	15.6	15.1	14.7	14.3	13.9	13.5	13.2	12.9	12.6	12.3	400
420	68.0	57.2	49.5	43.7	39.2	35.6	32.7	30.2	28.2	26.4	24.8	23.5	22.3	21.2	20.3	19.4	18.7	18.0	17.3	16.8	16.2	15.7	15.3	14.8	14.4	14.1	13.7	13.4	13.1	12.8	420
440	70.3	59.1	51.2	45.2	40.6	36.8	33.8	31.3	29.1	27.3	25.7	24.3	23.1	22.0	21.0	20.1	19.3	18.6	18.0	17.4	16.8	16.3	15.8	15.4	15.0	14.6	14.2	13.9	13.6	13.3	440
460	72.6	61.1	52.9	46.7	41.9	38.1	34.9	32.3	30.1	28.2	26.6	25.1	23.9	22.8	21.7	20.8	20.0	19.3	18.6	18.0	17.4	16.9	16.4	15.9	15.5	15.1	14.7	14.4	14.0	13.7	460
480	74.9	63.0	54.6	48.2	43.3	39.3	36.1	33.4	31.1	29.2	27.5	26.0	24.7	23.5	22.5	21.5	20.7	19.9	19.2	18.6	18.0	17.4	16.9	16.4	16.0	15.6	15.2	14.9	14.5	14.2	480
500	77.2	65.0	56.2	49.7	44.6	40.5	37.2	34.4	32.1	30.1	28.3	26.8	25.5	24.3	23.2	22.2	21.3	20.6	19.8	19.2	18.6	18.0	17.5	17.0	16.5	16.1	15.7	15.4	15.0	14.7	500
600	88.7	74.7	64.7	57.2	51.4	46.7	42.9	39.7	37.0	34.7	32.7	30.9	29.4	28.0	26.8	25.7	24.7	23.8	23.0	22.2	21.5	20.8	20.2	19.7	19.2	18.7	18.2	17.8	17.4	17.0	600
700	100.3	84.5	73.2	64.7	58.1	52.9	48.6	45.0	41.9	39.3	37.1	35.1	33.3	31.8	30.4	29.2	28.0	27.0	26.1	25.2	24.4	23.7	23.0	22.4	21.8	21.3	20.8	20.3	19.8	19.4	700
800	111.8	94.2	81.6	72.2	64.9	59.0	54.2	50.2	46.8	43.9	41.4	39.2	37.3	35.6	34.0	32.6	31.4	30.2	29.2	28.2	27.4	26.5	25.8	25.1	24.4	23.8	23.3	22.7	22.2	21.8	800
900	123.4	104.0	90.1	79.7	71.6	65.2	59.9	55.5	51.8	48.8	45.8	43.4	41.2	39.3	37.6	36.1	34.7	33.5	32.3	31.3	30.3	29.4	28.6	27.8	27.1	26.4	25.8	25.2	24.6	24.1	900
1000	134.9	113.7	98.6	87.2	78.4	71.3	65.6	60.8	56.7	53.2	50.2	47.5	45.2	43.1	41.2	39.6	38.1	36.7	35.4	34.3	33.2	32.2	31.3	30.5	29.7	29.0	28.3	27.7	27.1	26.5	1000
1100	146.4	123.5	107.0	94.7	85.2	77.5	71.2	66.0	61.6	57.8	54.5	51.7	49.1	46.9	44.9	43.0	41.4	39.9	38.5	37.3	36.2	35.1	34.1	33.2	32.3	31.6	30.8	30.1	29.5	28.9	1100
1200	158.0	133.2	115.5	102.2	91.9	83.7	76.9	71.3	66.5	62.4	58.9	55.8	53.1	50.6	48.5	46.5	44.7	43.1	41.7	40.3	39.1	37.9	36.9	35.9	35.0	34.1	33.3	32.6	31.9	31.2	1200
1300	169.5	142.9	124.0	109.7	98.7	89.8	82.6	76.5	71.4	67.1	63.3	59.9	57.0	54.4	52.1	50.0	48.1	46.4	44.8	43.3	42.0	40.8	39.7	38.6	37.6	36.7	35.8	35.0	34.3	33.6	1300
1400	181.1	152.7	132.4	117.3	105.4	96.0	88.3	81.8	76.4	71.7	67.6	64.1	61.0	58.2	55.7	53.5	51.4	49.6	47.9	46.4	44.9	43.6	42.4	41.3	40.3	39.3	38.4	37.5	36.7	35.9	1400
1500	192.6	162.4	140.9	124.8	112.2	102.1	93.9	87.1	81.3	76.3	72.0	68.2	64.9	61.9	59.3	56.9	54.8	52.8	51.0	49.4	47.9	46.5	45.2	44.0	42.9	41.8	40.9	40.0	39.1	38.3	1500
Term. 2/	19.490	16.242	13.921	12.181	10.828	9.745	8.859	8.121	7.490	6.961	6.497	6.091	5.732	5.414	5.129	4.873	4.640	4.430	4.237	4.060	3.898	3.748	3.609	3.480	3.360	3.248	3.144	3.045	2.953	2.866	Term. 2/
L. H. 3/	.115400	.097467	.084657	.075050	.067578	.061600	.056709	.052633	.049185	.046229	.043667	.041425	.039447	.037689	.036116	.034700	.033419	.032255	.031191	.030217	.029320	.028492	.027726	.027014	.026352	.025733	.025155	.024613	.024103	.023624	L. H. 3/

1/ Based on a tare weight of 21.0 tons and a ratio of empty car miles to loaded car miles of 0.830. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.59.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.74.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 59 (Concluded).--TERRITORY NO. 9 - WESTERN TRUNK LINE, including Northern Illinois but excluding Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Territory No. 9 - Western Trunk Line, incl. No. Ill. but excl. Sou. Mo.

GONDOLA AND HOPPER CARS

Miles	Net load in tons per car: 35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	Miles
10	3.0	2.9	2.9	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	10
20	3.2	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	20
30	3.5	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	30
40	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	40
50	3.9	3.8	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	50
60	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	60
70	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	70
80	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.9	2.8	80
90	4.9	4.8	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	90
100	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1	100
120	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.2	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.5	120
140	6.0	5.9	5.8	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	140
160	6.5	6.3	6.2	6.1	6.0	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	160
180	7.0	6.8	6.7	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.5	4.4	180
200	7.4	7.3	7.1	7.0	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	200
220	7.9	7.7	7.5	7.4	7.2	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.3	5.2	5.1	5.1	220
240	8.3	8.2	8.0	7.8	7.7	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	5.4	240
260	8.8	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.7	260
280	9.3	9.1	8.9	8.7	8.5	8.4	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.3	6.2	6.1	6.1	280
300	9.7	9.5	9.3	9.2	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.4	6.4	300
320	10.2	10.0	9.8	9.6	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.8	6.7	320
340	10.7	10.4	10.2	10.0	9.8	9.7	9.5	9.3	9.2	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	340
360	11.1	10.9	10.7	10.5	10.3	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	7.4	360
380	11.6	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	380
400	12.1	11.8	11.6	11.3	11.1	10.9	10.7	10.6	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.0	400
420	12.5	12.3	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.2	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	420
440	13.0	12.7	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.7	440
460	13.4	13.2	12.9	12.7	12.4	12.2	12.0	11.8	11.6	11.4	11.3	11.1	10.9	10.8	10.6	10.5	10.4	10.2	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.2	9.1	9.0	460
480	13.9	13.6	13.3	13.1	12.9	12.6	12.4	12.2	12.0	11.8	11.6	11.5	11.3	11.2	11.0	10.9	10.7	10.6	10.5	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	480
500	14.4	14.1	13.8	13.5	13.3	13.1	12.8	12.6	12.4	12.2	12.0	11.9	11.7	11.5	11.4	11.2	11.1	10.9	10.8	10.7	10.6	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	500
600	16.7	16.4	16.0	15.7	15.5	15.2	14.9	14.7	14.5	14.2	14.0	13.8	13.6	13.4	13.3	13.1	12.9	12.8	12.6	12.5	12.3	12.2	12.1	11.9	11.8	11.7	11.6	11.5	11.4	11.2	600
700	19.0	18.6	18.3	17.9	17.6	17.3	17.0	16.7	16.5	16.2	16.0	15.8	15.5	15.3	15.1	14.9	14.8	14.6	14.4	14.2	14.1	13.9	13.8	13.6	13.5	13.4	13.2	13.1	13.0	12.9	700
800	21.3	20.9	20.5	20.1	19.8	19.4	19.1	18.8	18.5	18.2	18.0	17.7	17.5	17.2	17.0	16.8	16.6	16.4	16.2	16.0	15.8	15.7	15.5	15.3	15.2	15.0	14.9	14.8	14.6	14.5	800
900	23.6	23.2	22.7	22.3	21.9	21.6	21.2	20.9	20.5	20.2	19.9	19.7	19.4	19.1	18.9	18.7	18.4	18.2	18.0	17.8	17.6	17.4	17.2	17.0	16.9	16.7	16.6	16.4	16.3	16.1	900
1000	26.0	25.5	25.0	24.5	24.1	23.7	23.3	22.9	22.6	22.2	21.9	21.6	21.3	21.0	20.8	20.5	20.3	20.0	19.8	19.6	19.4	19.1	18.9	18.8	18.6	18.4	18.2	18.0	17.9	17.7	1000
1100	28.3	27.7	27.2	26.7	26.3	25.8	25.4	25.0	24.6	24.2	23.9	23.6	23.2	22.9	22.6	22.4	22.1	21.8	21.6	21.3	21.1	20.9	20.7	20.5	20.3	20.1	19.9	19.7	19.5	19.3	1100
1200	30.6	30.0	29.4	28.9	28.4	27.9	27.5	27.1	26.6	26.2	25.9	25.5	25.2	24.8	24.5	24.2	23.9	23.6	23.4	23.1	22.9	22.6	22.4	22.2	22.0	21.7	21.5	21.3	21.2	21.0	1200
1300	32.9	32.3	31.7	31.1	30.6	30.1	29.6	29.1	28.7	28.3	27.8	27.5	27.1	26.7	26.4	26.1	25.8	25.5	25.2	24.9	24.6	24.4	24.1	23.9	23.6	23.4	23.2	23.0	22.8	22.6	1300
1400	35.2	34.5	33.9	33.3	32.7	32.2	31.7	31.2	30.7	30.3	29.8	29.4	29.0	28.6	28.3	27.9	27.6	27.3	27.0	26.7	26.4	26.1	25.8	25.6	25.3	25.1	24.9	24.6	24.4	24.2	1400
1500	37.5	36.8	36.1	35.5	34.9	34.3	33.8	33.2	32.7	32.3	31.8	31.4	30.9	30.5	30.2	29.8	29.4	29.1	28.8	28.4	28.1	27.9	27.6	27.3	27.0	26.8	26.5	26.3	26.1	25.8	1500
2/	2.784	2.707	2.634	2.564	2.499	2.435	2.377	2.320	2.266	2.215	2.166	2.118	2.073	2.030	1.989	1.949	1.911	1.874	1.839	1.805	1.772	1.740	1.710	1.680	1.652	1.624	1.598	1.572	1.547	1.523	Term. 2/
3/	.023171	.022744	.022341	.021958	.021595	.021250	.020922	.020610	.020312	.020027	.019756	.19496	.019247	.019008	.018780	.018560	.018349	.018146	.017951	.017763	.017582	.017407	.017239	.017076	.016919	.016767	.016620	.016477	.016340	.016206	L. H. 3/

sed on a tare weight of 21.0 tons and a ratio of empty car miles to loaded car miles of 0.630. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.59.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.74.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 9 - Western Trunk Line, incl. No. Ill. but excl. Sou. Mo.

TANK CARS

TABLE 50.--TERRITORY NO. 9 - WESTERN TRUNK LINE, including Northern Illinois but excluding Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
10	18.0	15.0	12.9	11.3	10.0	9.0	8.2	7.5	7.0	6.5	6.0	5.7	5.3	5.1	4.8	4.6	4.3	4.1	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7
20	19.4	16.2	13.9	12.2	10.8	9.8	8.9	8.2	7.6	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0
30	20.8	17.3	14.9	13.1	11.6	10.5	9.6	8.8	8.1	7.6	7.1	6.7	6.3	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.5	3.4	3.3	3.3
40	22.2	18.5	15.9	14.0	12.4	11.2	10.2	9.4	8.7	8.1	7.6	7.1	6.7	6.4	6.1	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.8	3.7	3.6	3.5
50	23.5	19.7	16.9	14.9	13.3	12.0	10.9	10.0	9.3	8.7	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.7	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8
60	24.9	20.9	17.9	15.8	14.1	12.7	11.6	10.7	9.9	9.2	8.6	8.1	7.7	7.3	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.1
70	26.3	22.0	19.0	16.7	14.9	13.4	12.3	11.3	10.5	9.8	9.1	8.6	8.1	7.7	7.3	7.0	6.7	6.4	6.2	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.5	4.3
80	27.7	23.2	20.0	17.6	15.7	14.2	12.9	11.9	11.0	10.3	9.7	9.1	8.6	8.1	7.8	7.4	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.5	5.3	5.1	5.0	4.9	4.7	4.6
90	29.1	24.4	21.0	18.5	16.5	14.9	13.6	12.5	11.6	10.8	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.9
100	30.5	25.5	22.0	19.4	17.3	15.6	14.3	13.2	12.2	11.4	10.7	10.1	9.5	9.0	8.6	8.2	7.9	7.5	7.2	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.6	5.4	5.3	5.1
120	33.3	27.9	24.0	21.1	18.9	17.1	15.6	14.4	13.4	12.5	11.7	11.0	10.4	9.9	9.4	9.0	8.6	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.2	6.0	5.8	5.7
140	36.0	30.2	26.1	22.9	20.5	18.6	17.0	15.7	14.5	13.6	12.7	12.0	11.4	10.8	10.3	9.8	9.4	9.0	8.7	8.4	8.1	7.8	7.6	7.3	7.1	6.9	6.7	6.6	6.4	6.2
160	38.8	32.6	28.1	24.7	22.1	20.0	18.3	16.9	15.7	14.7	13.8	13.0	12.3	11.7	11.1	10.6	10.2	9.8	9.4	9.1	8.8	8.5	8.2	8.0	7.7	7.5	7.3	7.1	6.9	6.8
180	41.6	34.9	30.1	26.5	23.7	21.5	19.7	18.2	16.9	15.8	14.8	14.0	13.2	12.6	12.0	11.5	11.0	10.5	10.1	9.8	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.3
200	44.4	37.2	32.1	28.3	25.3	23.0	21.0	19.4	18.0	16.9	15.8	14.9	14.2	13.5	12.8	12.3	11.8	11.3	10.9	10.5	10.1	9.8	9.5	9.2	8.9	8.7	8.5	8.3	8.0	7.9
220	47.2	39.6	34.2	30.1	27.0	24.4	22.4	20.6	19.2	17.9	16.9	15.9	15.1	14.3	13.7	13.1	12.5	12.0	11.6	11.2	10.8	10.5	10.1	9.8	9.6	9.3	9.0	8.8	8.6	8.4
240	49.9	41.9	36.2	31.9	28.6	25.9	23.7	21.9	20.4	19.0	17.9	16.9	16.0	15.2	14.5	13.9	13.3	12.8	12.3	11.9	11.5	11.2	10.8	10.5	10.2	9.9	9.6	9.4	9.2	8.9
260	52.7	44.3	38.2	33.7	30.2	27.4	25.1	23.1	21.5	20.1	18.9	17.9	16.9	16.1	15.4	14.7	14.1	13.5	13.0	12.6	12.2	11.8	11.4	11.1	10.8	10.5	10.2	9.9	9.7	9.5
280	55.5	46.6	40.3	35.5	31.8	28.8	26.4	24.4	22.7	21.2	20.0	18.8	17.9	17.0	16.2	15.5	14.9	14.3	13.8	13.3	12.8	12.4	12.1	11.7	11.4	11.1	10.8	10.5	10.3	10.0
300	58.3	48.9	42.3	37.3	33.4	30.3	27.8	25.6	23.9	22.3	21.0	19.8	18.8	17.9	17.1	16.3	15.7	15.1	14.5	14.0	13.5	13.1	12.7	12.3	12.0	11.7	11.4	11.1	10.8	10.6
320	61.0	51.3	44.3	39.1	35.0	31.8	29.1	26.9	25.0	23.4	22.0	20.8	19.7	18.8	17.9	17.1	16.4	15.8	15.2	14.7	14.2	13.8	13.3	13.0	12.6	12.3	11.9	11.6	11.4	11.1
340	63.8	53.6	46.3	40.9	36.6	33.2	30.5	28.1	26.2	24.5	23.0	21.8	20.6	19.6	18.7	17.9	17.2	16.6	16.0	15.4	14.9	14.4	14.0	13.6	13.2	12.8	12.5	12.2	11.9	11.6
360	66.6	56.0	48.4	42.7	38.2	34.7	31.8	29.4	27.3	25.6	24.1	22.7	21.6	20.5	19.6	18.8	18.0	17.3	16.7	16.1	15.6	15.1	14.6	14.2	13.8	13.4	13.1	12.8	12.5	12.2
380	69.4	58.3	50.4	44.5	39.9	36.2	33.2	30.6	28.5	26.7	25.1	23.7	22.5	21.4	20.4	19.6	18.8	18.1	17.4	16.8	16.2	15.7	15.3	14.8	14.4	14.0	13.7	13.3	13.0	12.7
400	72.2	60.7	52.4	46.3	41.5	37.6	34.5	31.9	29.7	27.8	26.1	24.7	23.4	22.3	21.3	20.4	19.6	18.8	18.1	17.5	16.9	16.4	15.9	15.4	15.0	14.6	14.3	13.9	13.6	13.3
420	74.9	63.0	54.5	48.1	43.1	39.1	35.8	33.1	30.8	28.9	27.2	25.7	24.4	23.2	22.1	21.2	20.3	19.6	18.9	18.2	17.6	17.1	16.5	16.1	15.6	15.2	14.8	14.5	14.1	13.8
440	77.7	65.3	56.5	49.9	44.7	40.6	37.2	34.4	32.0	30.0	28.2	26.6	25.3	24.1	23.0	22.0	21.1	20.3	19.6	18.9	18.3	17.7	17.2	16.7	16.2	15.8	15.4	15.0	14.7	14.4
460	80.5	67.7	58.5	51.7	46.3	42.0	38.5	35.6	33.2	31.1	29.2	27.6	26.2	24.9	23.8	22.8	21.9	21.1	20.3	19.6	19.0	18.4	17.8	17.3	16.8	16.4	16.0	15.6	15.2	14.9
480	83.3	70.0	60.5	53.4	47.9	43.5	39.9	36.9	34.3	32.1	30.3	28.6	27.1	25.8	24.7	23.6	22.7	21.8	21.0	20.3	19.6	19.0	18.5	17.9	17.5	17.0	16.6	16.2	15.8	15.4
500	86.0	72.4	62.6	55.2	49.5	45.0	41.2	38.1	35.5	33.2	31.3	29.6	28.1	26.7	25.5	24.4	23.5	22.6	21.8	21.0	20.3	19.7	19.1	18.6	18.1	17.6	17.1	16.7	16.3	16.0
600	99.9	84.1	72.7	64.2	57.6	52.3	48.0	44.4	41.3	38.7	36.4	34.4	32.7	31.1	29.7	28.5	27.4	26.3	25.4	24.5	23.7	23.0	22.3	21.7	21.1	20.6	20.0	19.6	19.1	18.7
700	113.8	95.8	82.9	73.2	65.7	59.6	54.7	50.6	47.1	44.2	41.6	39.3	37.3	35.6	34.0	32.6	31.3	30.1	29.0	28.0	27.1	26.3	25.5	24.8	24.1	23.5	22.9	22.4	21.9	21.4
800	127.7	107.5	93.0	82.2	73.7	67.0	61.5	56.9	53.0	49.6	46.7	44.2	42.0	40.0	38.2	36.6	35.2	33.8	32.6	31.5	30.5	29.6	28.7	27.9	27.2	26.5	25.8	25.2	24.6	24.1
900	141.6	119.2	103.1	91.1	81.8	74.3	68.2	63.1	58.8	55.1	51.9	49.1	46.6	44.4	42.4	40.7	39.1	37.6	36.3	35.1	33.9	32.9	31.9	31.1	30.2	29.4	28.7	28.0	27.4	26.8
1000	155.5	130.9	113.3	100.1	89.8	81.6	74.9	69.3	64.6	60.5	57.0	54.0	51.2	48.8	46.7	44.7	43.0	41.4	39.9	38.6	37.3	36.2	35.1	34.2	33.3	32.4	31.6	30.9	30.2	29.5
1100	169.4	142.6	123.4	109.1	97.9	89.0	81.7	75.6	70.4	66.0	62.2	58.8	55.9	53.2	50.9	48.8	46.9	45.1	43.5	42.1	40.7	39.5	38.4	37.3	36.3	35.4	34.5	33.7	32.9	32.2
1200	183.3	154.3	133.6	118.0	106.0	96.3	88.4	81.8	76.2	71.5	67.3	63.7	60.5	57.7	55.1	52.8	50.8	48.9	47.2	45.6	44.1	42.8	41.6	40.4	39.3	38.3	37.4	36.5	35.7	34.9
1300	197.1	166.0	143.7	127.0	114.0	103.6	95.1	88.1	82.1	76.9	72.5	68.6	65.1	62.1	59.4	56.9	54.7	52.6	50.8	49.1	47.5	46.1	44.8	43.5	42.4	41.3	40.3	39.4	38.5	37.6
1400	211.0	177.7	153.9	136.0	122.1	111.0	101.8	94.3	87.9	82.4	77.6	73.5	69.8	66.5	63.6	60.9	58.6	56.4	54.4	52.6	50.9	49.4	48.0	46.7	45.4	44.3	43.2	42.2	41.2	40.3
1500	224.9	189.4	164.0	145.0	130.2	118.3	108.6	100.5	93.7	87.9	82.8	78.3	74.4	70.9	67.8	65.0	62.5	60.2	58.1	56.1	54.3	52.7	51.2	49.8	48.5	47.2	46.1	45.0	44.0	43.1
Term. 2/	16.604	13.837	11.860	10.378	9.224	8.302	7.547	6.918	6.386	5.930	5.515	5.189	4.884	4.619	4.369	4.151	3.953	3.774	3.610	3.459	3.321	3.193	3.075	2.965	2.863	2.767	2.678	2.594	2.516	2.442
L. H. 3/	.138880	.117033	.101489	.089725	.080622	.073340	.067382	.062412	.058215	.054614	.051493	.048763	.046357	.044211	.042295	.040570	.039010	.037591	.036296	.035108	.034016	.033008	.032074	.031207	.030400	.029647	.028942	.028281	.027661	.027076

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.390. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.59.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.74.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 60 (Concluded).--TERRITORY NO. 9 - WESTERN TRUNK LINE, including Northern Illinois but excluding Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Territory No. 9 - Western Trunk Line, incl. No. Ill. but excl. Sou. Mo.

TANK CARS

Miles	Net load in tons per car																												Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40	3.4	3.3	3.3	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90	4.8	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.9	3.8	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
120	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.2	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
140	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
160	6.6	6.5	6.3	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.2	5.1	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
180	7.1	7.0	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
200	7.7	7.5	7.3	7.2	7.1	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
220	8.2	8.0	7.9	7.7	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.5	6.4	6.4	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
240	8.7	8.5	8.4	8.2	8.0	7.9	7.7	7.6	7.5	7.3	7.2	7.1	7.0	6.9	6.8	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
260	9.3	9.1	8.9	8.7	8.5	8.4	8.2	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
280	9.8	9.6	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.9	7.7	7.6	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
300	10.3	10.1	9.9	9.7	9.5	9.3	9.2	9.0	8.8	8.7	8.6	8.4	8.3	8.2	8.0	7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
320	10.9	10.6	10.4	10.2	10.0	9.8	9.6	9.5	9.3	9.1	9.0	8.9	8.7	8.6	8.5	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
340	11.4	11.1	10.9	10.7	10.5	10.3	10.1	9.9	9.8	9.6	9.4	9.3	9.2	9.0	8.9	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
360	11.9	11.7	11.4	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.7	9.6	9.5	9.3	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
380	12.5	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.9	9.7	9.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
400	13.0	12.7	12.4	12.2	12.0	11.8	11.5	11.3	11.1	11.0	10.8	10.6	10.5	10.3	10.2	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
420	13.5	13.2	13.0	12.7	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.7	10.6	10.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
440	14.0	13.7	13.5	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.2	11.0	10.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
460	14.6	14.3	14.0	13.7	13.4	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.8	11.6	11.4	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
480	15.1	14.8	14.5	14.2	13.9	13.7	13.4	13.2	13.0	12.8	12.6	12.4	12.2	12.0	11.9	11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
500	15.6	15.3	15.0	14.7	14.4	14.2	13.9	13.7	13.5	13.2	13.0	12.8	12.6	12.5	12.3	12.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
600	18.3	17.9	17.6	17.2	16.9	16.6	16.3	16.0	15.8	15.5	15.3	15.0	14.8	14.6	14.4	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
700	20.9	20.5	20.1	19.7	19.4	19.0	18.7	18.4	18.1	17.8	17.5	17.2	17.0	16.7	16.5	16.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
800	23.6	23.1	22.7	22.2	21.8	21.4	21.1	20.7	20.4	20.0	19.7	19.4	19.2	18.9	18.6	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
900	26.2	25.7	25.2	24.7	24.3	23.8	23.4	23.0	22.7	22.3	22.0	21.6	21.3	21.0	20.8	20.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
1000	28.9	28.3	27.8	27.2	26.7	26.3	25.8	25.4	25.0	24.6	24.2	23.9	23.5	23.2	22.9	22.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
1100	31.6	30.9	30.3	29.7	29.2	28.7	28.2	27.7	27.3	26.9	26.4	26.1	25.7	25.3	25.0	24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
1200	34.2	33.5	32.9	32.2	31.7	31.1	30.6	30.1	29.6	29.1	28.7	28.3	27.9	27.5	27.1	26.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1300	36.9	36.1	35.4	34.7	34.1	33.5	32.9	32.4	31.9	31.4	30.9	30.5	30.0	29.6	29.2	28.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
1400	39.5	38.7	38.0	37.3	36.6	35.9	35.3	34.7	34.2	33.7	33.2	32.7	32.2	31.8	31.3	30.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1500	42.2	41.3	40.5	39.8	39.0	38.4	37.7	37.1	36.5	35.9	35.4	34.9	34.4	33.9	33.5	33.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
Term. 2/	2.372	2.306	2.244	2.185	2.129	2.076	2.025	1.977	1.931	1.887	1.845	1.805	1.766	1.730	1.694	1.660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.026526	.026006	.025514	.025047	.024605	.024185	.023785	.023405	.023042	.022695	.022364	.022048	.021745	.021454	.021176	.020908	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.5 tons and a ratio of empty car miles to loaded car miles of 0.990. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.59.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.74.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 9 - Western Trunk Line, incl. No. Ill. but excl. Sou. Mo.

STOCK CARS

TABLE 61.—TERRITORY NO. 9 - WESTERN TRUNK LINE, including Northern Illinois but excluding Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.7	17.2	14.8	12.9	11.5	10.4	9.4	8.7	8.0	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.8	3.6	3.5	-	-	-	-	10
20	21.8	18.2	15.6	13.7	12.2	11.0	10.0	9.2	8.5	7.9	7.4	6.9	6.5	6.2	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	-	-	-	-	20
30	23.0	19.2	16.5	14.5	12.9	11.6	10.6	9.7	9.0	8.4	7.8	7.4	6.9	6.6	6.2	5.9	5.7	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	-	-	-	-	30
40	24.2	20.2	17.4	15.2	13.6	12.2	11.2	10.3	9.5	8.8	8.3	7.8	7.3	6.9	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	-	-	-	-	40
50	25.4	21.2	18.2	16.0	14.3	12.9	11.7	10.8	10.0	9.3	8.7	8.2	7.7	7.3	7.0	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	-	-	-	-	50
60	26.4	22.2	19.1	16.8	14.9	13.5	12.3	11.3	10.5	9.8	9.2	8.6	8.1	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	-	-	-	-	60
70	27.7	23.2	19.9	17.5	15.6	14.1	12.9	11.9	11.0	10.2	9.6	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	5.1	-	-	-	-	70
80	28.9	24.2	20.8	18.3	16.3	14.7	13.5	12.4	11.5	10.7	10.0	9.5	8.9	8.5	8.1	7.7	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.3	-	-	-	-	80
90	30.0	25.1	21.7	19.0	17.0	15.4	14.0	12.9	12.0	11.2	10.5	9.9	9.3	8.9	8.4	8.0	7.7	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.8	5.6	-	-	-	-	90
100	31.2	26.1	22.5	19.8	17.7	16.0	14.6	13.5	12.5	11.6	10.9	10.3	9.7	9.2	8.8	8.4	8.0	7.7	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.9	-	-	-	-	100
120	33.6	28.1	24.2	21.3	19.1	17.2	15.8	14.5	13.5	12.6	11.8	11.1	10.5	10.0	9.5	9.1	8.7	8.3	8.0	7.7	7.5	7.2	7.0	6.8	6.6	6.4	-	-	-	-	120
140	35.9	30.1	26.0	22.8	20.4	18.5	16.9	15.6	14.5	13.5	12.7	12.0	11.3	10.8	10.3	9.8	9.4	9.0	8.7	8.3	8.1	7.8	7.5	7.3	7.1	6.9	-	-	-	-	140
160	38.2	32.1	27.7	24.4	21.8	19.7	18.1	16.7	15.5	14.5	13.6	12.8	12.1	11.5	11.0	10.5	10.1	9.7	9.3	9.0	8.6	8.4	8.1	7.9	7.6	7.4	-	-	-	-	160
180	40.6	34.1	29.4	25.9	23.2	21.0	19.2	17.7	16.5	15.4	14.5	13.6	12.9	12.3	11.7	11.2	10.7	10.3	9.9	9.6	9.2	8.9	8.7	8.4	8.2	7.9	-	-	-	-	180
200	42.9	36.0	31.1	27.4	24.5	22.2	20.4	18.8	17.5	16.3	15.4	14.5	13.7	13.1	12.4	11.9	11.4	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.7	8.5	-	-	-	-	200
220	45.3	38.0	32.8	28.9	25.9	23.5	21.5	19.9	18.5	17.3	16.2	15.3	14.5	13.8	13.2	[illegible]	12.1	11.6	11.2	10.8	10.4	10.1	9.8	9.5	9.2	9.0	-	-	-	-	220
240	47.6	40.0	34.5	30.5	27.3	24.7	22.7	20.9	19.5	18.2	17.1	16.2	15.3	14.6	13.9	[illegible]	12.8	12.3	11.8	11.4	11.0	10.7	10.3	10.0	9.8	9.5	-	-	-	-	240
260	50.0	42.0	36.3	32.0	28.7	26.0	23.8	22.0	20.5	19.1	18.0	17.0	16.1	15.3	14.6	[illegible]	13.4	12.9	12.4	12.0	11.6	11.2	10.9	10.6	10.3	10.0	-	-	-	-	260
280	52.3	44.0	38.0	33.5	30.0	27.2	25.0	23.1	21.5	20.1	18.9	17.8	16.9	16.1	15.4	14.7	14.1	13.6	13.1	12.6	12.2	11.8	11.5	11.1	10.8	10.5	-	-	-	-	280
300	54.7	45.9	39.7	35.0	31.4	28.5	26.1	24.1	22.5	21.0	19.8	18.7	17.7	16.9	16.1	15.4	14.8	14.2	13.7	13.2	12.8	12.4	12.0	11.7	11.4	11.1	-	-	-	-	300
320	67.0	47.9	41.4	36.6	32.8	29.7	27.3	25.2	23.5	22.0	20.7	19.5	18.5	17.6	16.8	16.1	15.5	14.9	14.3	13.8	13.4	13.0	12.6	12.2	11.9	11.6	-	-	-	-	320
340	59.3	49.9	43.1	38.1	34.1	31.0	28.4	26.3	24.5	22.9	21.5	20.4	19.3	18.4	17.6	16.8	16.1	15.5	15.0	14.5	14.0	13.6	13.1	12.8	12.4	12.1	-	-	-	-	340
360	61.7	51.9	44.9	39.6	35.5	32.2	29.6	27.3	25.5	23.8	22.4	21.2	20.1	19.2	18.3	17.5	16.8	16.2	15.6	15.1	14.6	14.1	13.7	13.3	13.0	12.6	-	-	-	-	360
380	64.0	53.8	46.6	41.1	36.9	33.5	30.7	28.4	26.4	24.8	23.3	22.0	20.9	19.9	19.0	18.2	17.5	16.8	16.2	15.7	15.2	14.7	14.3	13.9	13.5	13.1	-	-	-	-	380
400	66.4	55.8	48.3	42.7	38.3	34.7	31.9	29.5	27.4	25.7	24.2	22.9	21.7	20.7	19.8	18.9	18.2	17.5	16.9	16.3	15.8	15.3	14.8	14.4	14.0	13.7	-	-	-	-	400
420	68.7	57.8	50.0	44.2	39.6	36.0	33.0	30.5	28.4	26.6	25.1	23.7	22.5	21.5	20.5	19.6	18.9	18.1	17.5	16.9	16.4	15.9	15.4	15.0	14.6	14.2	-	-	-	-	420
440	71.1	59.8	51.7	45.7	41.0	37.2	34.2	31.6	29.4	27.6	26.0	24.6	23.3	22.2	21.2	20.3	19.5	18.8	18.1	17.5	17.0	16.4	16.0	15.5	15.1	14.7	-	-	-	-	440
460	73.4	61.8	53.5	47.2	42.4	38.5	35.3	32.7	30.4	28.5	26.9	25.4	24.1	23.0	22.0	21.0	20.2	19.5	18.8	18.1	17.6	17.0	16.5	16.1	15.6	15.2	-	-	-	-	460
480	75.7	63.7	55.2	48.7	43.7	39.7	36.5	33.7	31.4	29.5	27.7	26.2	24.9	23.7	22.7	21.7	20.9	20.1	19.4	18.7	18.1	17.6	17.1	16.6	16.2	15.7	-	-	-	-	480
500	78.1	65.7	56.9	50.3	45.1	41.0	37.6	34.8	32.4	30.4	28.6	27.1	25.7	24.5	23.4	22.4	21.6	20.8	20.0	19.4	18.7	18.2	17.6	17.1	16.7	16.3	-	-	-	-	500
600	89.8	75.6	65.5	57.9	52.0	47.2	43.4	40.2	37.4	35.1	33.1	31.3	29.7	28.3	27.1	26.0	24.9	24.0	23.2	22.4	21.7	21.1	20.4	19.9	19.4	18.9	-	-	-	-	600
700	101.5	85.5	74.1	65.5	58.8	53.5	49.1	45.5	42.4	39.8	37.5	35.5	33.7	32.1	30.7	29.5	28.3	27.3	26.3	25.5	24.7	23.9	23.3	22.6	22.0	21.5	-	-	-	-	700
800	113.3	95.4	82.7	73.1	65.7	59.7	54.9	50.8	47.4	44.5	41.9	39.7	37.7	36.0	34.4	33.0	31.7	30.6	29.5	28.5	27.6	26.8	26.1	25.3	24.7	24.1	-	-	-	-	800
900	125.0	105.3	91.3	80.7	72.5	66.0	60.6	56.2	52.4	49.1	46.3	43.9	41.7	39.8	38.1	36.5	35.1	33.8	32.7	31.6	30.6	29.7	28.9	28.1	27.4	26.7	-	-	-	-	900
1000	136.7	115.2	99.9	88.4	79.4	72.2	66.4	61.5	57.4	53.8	50.8	48.1	45.7	43.6	41.7	40.0	38.5	37.1	35.8	34.7	33.6	32.6	31.7	30.8	30.0	29.3	-	-	-	-	1000
1100	148.4	125.1	108.5	96.0	86.3	78.5	72.1	66.8	62.4	58.5	55.2	52.3	49.7	47.4	45.4	43.5	41.9	40.4	39.0	37.7	36.5	35.5	34.5	33.5	32.7	31.9	-	-	-	-	1100
1200	160.1	135.0	117.1	103.6	93.1	84.7	77.9	72.2	67.3	63.2	59.6	56.5	53.7	51.2	49.0	47.1	45.3	43.6	42.1	40.8	39.5	38.4	37.3	36.3	35.4	34.5	-	-	-	-	1200
1300	171.9	144.9	125.6	111.2	100.0	91.0	83.6	77.5	72.3	67.9	64.0	60.7	57.7	55.1	52.7	50.6	48.6	46.9	45.3	43.8	42.5	41.2	40.1	39.0	38.0	37.1	-	-	-	-	1300
1400	183.6	154.8	134.2	118.8	106.8	97.2	89.4	82.9	77.3	72.6	68.5	64.9	61.7	58.9	56.4	54.1	52.0	50.2	48.5	46.9	45.5	44.1	42.9	41.8	40.7	39.7	-	-	-	-	1400
1500	195.3	164.7	142.8	126.4	113.7	103.5	95.1	88.2	82.3	77.3	72.9	69.1	65.7	62.7	60.0	57.6	55.4	53.4	51.6	49.9	48.4	47.0	45.7	44.5	43.4	42.3	-	-	-	-	1500
Term. 2/	19.490	16.242	13.921	12.181	10.828	9.745	8.859	8.121	7.496	6.961	6.497	6.091	5.732	5.414	5.129	4.873	4.640	4.430	4.237	4.060	3.898	3.748	3.609	3.480	3.360	3.248	-	-	-	-	Term. 2/
L. H. 3/	.117200	.098967	.085943	.076175	.068578	.062500	.057527	.053383	.049877	.046871	.044267	.041988	.039976	.038189	.036589	.035150	.033848	.032664	.031583	.030592	.029680	.028838	.028059	.027336	.026666	.026033	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 20.1 tons and a ratio of empty car miles to loaded car miles of 0.906. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.59.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.74.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 62.--TERRITORY NO. 9 - WESTERN TRUNK LINE, including Northern Illinois but excluding Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Territory No. 9 - Western Trunk Line, incl. No. Ill. but excl. Sou. Mo.

REFRIGERATOR CARS

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	18.0	15.0	12.9	11.3	10.0	9.1	8.2	7.6	7.0	6.5	6.1	5.7	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.1	-	-	-	-	10
20	19.4	16.2	13.9	12.2	10.9	9.8	8.9	8.2	7.6	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.2	4.0	3.9	3.7	3.6	3.5	3.4	-	-	-	-	20
30	20.9	17.4	15.0	13.1	11.7	10.5	9.6	8.8	8.2	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	3.7	-	-	-	-	30
40	22.3	18.6	16.0	14.0	12.5	11.3	10.3	9.5	8.8	8.2	7.6	7.2	6.8	6.4	6.1	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	-	-	-	-	40
50	23.7	19.8	17.0	15.0	13.3	12.0	11.0	10.1	9.4	8.7	8.2	7.7	7.2	6.9	6.5	6.2	5.9	5.7	5.5	5.2	5.1	4.9	4.7	4.6	4.4	4.3	-	-	-	-	50
60	25.1	21.0	18.1	15.9	14.2	12.8	11.7	10.7	9.9	9.3	8.7	8.2	7.7	7.3	7.0	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	-	-	-	-	60
70	26.5	22.2	19.1	16.8	15.0	13.9	12.4	11.4	10.5	9.8	9.2	8.7	8.2	7.8	7.4	7.0	6.7	6.5	6.2	6.0	5.7	5.5	5.4	5.2	5.0	4.9	-	-	-	-	70
80	28.0	23.4	20.1	17.7	15.8	14.3	13.0	12.0	11.1	10.4	9.7	9.2	8.7	8.2	7.8	7.5	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.2	-	-	-	-	80
90	29.4	24.6	21.2	18.6	16.6	15.0	13.7	12.6	11.7	10.9	10.3	9.7	9.1	8.7	8.2	7.9	7.5	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.5	-	-	-	-	90
100	30.8	25.8	22.2	19.5	17.5	15.8	14.4	13.3	12.3	11.5	10.8	10.2	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.0	6.8	6.6	6.3	6.1	6.0	5.8	-	-	-	-	100
120	33.6	28.2	24.3	21.4	19.1	17.3	15.8	14.6	13.5	12.6	11.8	11.2	10.6	10.0	9.5	9.1	8.7	8.4	8.0	7.7	7.5	7.2	7.0	6.8	6.6	6.4	-	-	-	-	120
140	36.5	30.6	26.4	23.2	20.7	18.8	17.2	15.8	14.7	13.7	12.9	12.1	11.5	10.9	10.4	9.9	9.5	9.1	8.8	8.5	8.2	7.9	7.6	7.4	7.2	7.0	-	-	-	-	140
160	39.3	33.0	28.4	25.0	22.4	20.3	18.5	17.1	15.9	14.8	13.9	13.1	12.4	11.8	11.3	10.8	10.3	9.9	9.5	9.2	8.9	8.6	8.3	8.0	7.8	7.6	-	-	-	-	160
180	42.1	35.4	30.5	26.9	24.0	21.8	19.9	18.4	17.1	16.0	15.0	14.1	13.4	12.7	12.1	11.6	11.1	10.7	10.3	9.9	9.6	9.2	8.9	8.7	8.4	8.2	-	-	-	-	180
200	45.0	37.8	32.6	28.7	25.7	23.3	21.3	19.7	18.3	17.1	16.0	15.1	14.3	13.6	13.0	12.4	11.9	11.4	11.0	10.6	10.2	9.9	9.6	9.3	9.0	8.8	-	-	-	-	200
220	47.8	40.1	34.7	30.5	27.3	24.8	22.7	20.9	19.5	18.2	17.1	16.1	15.3	14.5	13.8	13.2	12.7	12.2	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.4	-	-	-	-	220
240	50.7	42.5	36.7	32.4	29.0	26.3	24.1	22.2	20.6	19.3	18.1	17.1	16.2	15.4	14.7	14.1	13.5	13.0	12.5	12.0	11.6	11.3	10.9	10.6	10.3	10.0	-	-	-	-	240
260	53.5	44.9	38.8	34.2	30.6	27.8	25.4	23.5	21.8	20.4	19.2	18.1	17.2	16.3	15.6	14.9	14.3	13.7	13.2	12.8	12.3	11.9	11.6	11.2	10.9	10.6	-	-	-	-	260
280	56.3	47.3	40.9	36.0	32.3	29.3	26.8	24.7	23.0	21.5	20.2	19.1	18.1	17.2	16.4	15.7	15.1	14.5	14.0	13.	13.0	12.6	12.2	11.9	11.5	11.2	-	-	-	-	280
300	59.2	49.7	42.9	37.9	33.9	30.8	28.2	26.0	24.2	22.6	21.3	20.1	19.1	18.1	17.3	16.6	15.9	15.3	14.7	14.2	13.7	13.3	12.9	12.5	12.1	11.8	-	-	-	-	300
320	62.0	52.1	45.0	39.7	35.6	32.3	29.6	27.3	25.4	23.8	22.3	21.1	20.0	19.0	18.2	17.4	16.7	16.0	15.4	14.9	14.4	13.9	13.5	13.1	12.8	12.4	-	-	-	-	320
340	64.9	54.5	47.1	41.5	37.2	33.8	30.9	28.6	26.6	24.9	23.4	22.1	20.9	19.9	19.0	18.2	17.5	16.8	16.2	15.6	15.1	14.6	14.2	13.8	13.4	13.0	-	-	-	-	340
360	67.7	56.9	49.2	43.4	38.9	35.3	32.3	29.8	27.8	26.0	24.4	23.1	21.9	20.8	19.9	19.0	18.3	17.6	16.9	16.3	15.8	15.3	14.8	14.4	14.0	13.6	-	-	-	-	360
380	70.5	59.3	51.2	45.2	40.5	36.7	33.7	31.1	29.0	27.1	25.5	24.1	22.8	21.7	20.7	19.9	19.1	18.3	17.7	17.0	16.5	16.0	15.5	15.0	14.6	14.2	-	-	-	-	380
400	73.4	61.7	53.3	47.0	42.1	38.2	35.1	32.4	30.1	28.2	26.5	25.1	23.8	22.6	21.6	20.7	19.8	19.1	18.4	17.8	17.2	16.6	16.1	15.7	15.2	14.8	-	-	-	-	400
420	76.2	64.1	55.4	48.9	43.8	39.7	36.4	33.7	31.3	29.3	27.6	26.1	24.7	23.5	22.5	21.5	20.6	19.9	19.1	18.5	17.9	17.3	16.8	16.3	15.9	15.4	-	-	-	-	420
440	79.0	66.4	57.4	50.7	45.4	41.2	37.8	34.9	32.5	30.4	28.6	27.1	25.7	24.4	23.3	22.3	21.4	20.6	19.9	19.2	18.6	18.0	17.4	16.9	16.5	16.0	-	-	-	-	440
460	81.9	68.8	59.5	52.5	47.1	42.7	39.2	36.2	33.7	31.6	29.7	28.1	26.6	25.3	24.2	23.2	22.2	21.4	20.6	19.9	19.2	18.6	18.1	17.6	17.1	16.6	-	-	-	-	460
480	84.7	71.2	61.6	54.4	48.7	44.2	40.6	37.5	34.9	32.7	30.7	29.1	27.6	26.2	25.1	24.0	23.0	22.1	21.3	20.6	19.9	19.3	18.7	18.2	17.7	17.2	-	-	-	-	480
500	87.6	73.6	63.7	56.2	50.4	45.7	41.9	38.8	36.1	33.8	31.8	30.0	28.5	27.1	25.9	24.8	23.8	22.9	22.1	21.3	20.6	20.0	19.4	18.8	18.3	17.8	-	-	-	-	500
600	101.8	85.6	74.0	65.4	58.6	53.2	48.8	45.1	42.0	39.4	37.0	35.0	33.2	31.6	30.2	28.9	27.8	26.7	25.8	24.9	24.1	23.3	22.7	22.0	21.4	20.9	-	-	-	-	600
700	115.9	97.5	84.4	74.5	66.8	60.7	55.7	51.5	48.0	44.9	42.3	40.0	38.0	36.2	34.5	33.1	31.8	30.6	29.5	28.5	27.6	26.7	25.9	25.2	24.5	23.9	-	-	-	-	700
800	130.1	109.5	94.7	83.4	75.1	68.2	62.6	57.9	53.9	50.5	47.5	45.0	42.7	40.7	38.8	37.2	35.7	34.4	33.2	32.1	31.0	30.1	29.2	28.4	27.6	26.9	-	-	-	-	800
900	144.3	121.4	105.1	92.8	83.3	75.7	69.4	64.2	59.8	56.1	52.8	49.9	47.4	45.2	43.2	41.3	39.7	38.2	36.9	35.6	34.5	33.4	32.4	31.5	30.7	29.9	-	-	-	-	900
1000	158.5	133.4	115.5	102.0	91.5	83.2	76.3	70.6	65.8	61.6	58.0	54.9	52.1	49.7	47.5	45.5	43.7	42.1	40.6	39.2	37.9	36.8	35.7	34.7	33.8	32.9	-	-	-	-	1000
1100	172.7	145.4	125.8	111.2	99.8	90.6	83.2	77.0	71.7	67.2	63.3	59.9	56.9	54.2	51.8	49.6	47.7	45.9	44.3	42.8	41.4	40.1	39.0	37.9	36.9	35.9	-	-	-	-	1100
1200	186.9	157.3	136.2	120.3	108.0	98.1	90.1	83.3	77.6	72.8	68.5	64.8	61.6	58.7	56.1	53.7	51.6	49.7	48.0	46.3	44.9	43.5	42.2	41.1	40.0	39.0	-	-	-	-	1200
1300	201.1	169.3	146.5	129.5	116.2	105.6	96.9	89.7	83.6	78.3	73.8	69.8	66.3	63.2	60.4	57.9	55.6	53.5	51.7	49.9	48.3	46.9	45.5	44.2	43.1	42.0	-	-	-	-	1300
1400	215.3	181.2	156.9	138.7	124.5	113.1	103.8	96.1	89.5	83.9	79.0	74.8	71.0	67.7	64.7	62.0	59.6	57.4	55.3	53.5	51.8	50.2	48.8	47.4	46.2	45.0	-	-	-	-	1400
1500	229.5	193.2	167.3	147.8	132.7	120.6	110.7	102.4	95.5	89.5	84.3	79.8	75.8	72.2	69.0	66.1	63.6	61.2	59.0	57.1	55.3	53.6	52.0	50.6	49.2	48.0	-	-	-	-	1500
Term. 2/	16.604	13.837	11.860	10.378	9.224	8.302	7.547	6.918	6.386	5.930	5.535	5.189	4.884	4.612	4.369	4.151	3.953	3.774	3.610	3.459	3.321	3.193	3.075	2.965	2.863	2.767	-	-	-	-	Term. 2/
L. H. 3/	.141920	.119567	.103600	.091625	.082311	.074860	.068764	.063683	.059385	.055700	.052507	.049713	.047247	.045056	.043095	.041330	.039733	.038282	.036957	.035742	.034624	.033592	.032637	.031750	.030924	.030153	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.698. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.23.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.59.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.74.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 9 - Western Trunk Line, incl. No. Ill. but excl. So. Mo.

LESS-CARLOAD

TABLE 63.—TERRITORY NO. 9 - WESTERN TRUNK LINE, including Northern Illinois but excluding Southern Missouri

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	94.4	75.2	65.6	59.9	56.0	53.3	51.2	49.7	48.4	47.3	46.5	45.7	45.1	44.5	44.1	43.6	43.3	42.9	42.6	42.4	42.1	41.9	41.7	41.5	41.3	41.1	41.0	40.8	40.7	10
20	99.2	78.5	68.1	61.9	57.8	54.8	52.6	50.9	49.5	48.4	47.4	46.6	45.9	45.4	44.8	44.4	44.0	43.6	43.3	43.0	42.7	42.5	42.2	42.0	41.9	41.7	41.5	41.4	41.2	20
30	104.0	81.7	70.6	64.0	59.5	56.3	53.9	52.1	50.6	49.4	48.4	47.5	46.8	46.2	45.6	45.1	44.7	44.3	43.9	43.6	43.3	43.1	42.8	42.6	42.4	42.2	42.0	41.9	41.7	30
40	108.8	85.0	73.1	66.0	61.2	57.8	55.3	53.3	51.7	50.4	49.4	48.4	47.7	47.0	46.4	45.9	45.4	45.0	44.6	44.3	44.0	43.7	43.4	43.2	43.0	42.8	42.6	42.4	42.2	40
50	113.6	88.3	75.6	68.0	63.0	59.4	56.5	54.5	52.9	51.5	50.3	49.3	48.5	47.8	47.2	46.6	46.1	45.7	45.3	44.9	44.6	44.3	44.0	43.7	43.5	43.3	43.1	42.9	42.7	50
60	118.4	91.5	78.1	70.1	64.7	60.9	58.0	55.8	54.0	52.5	51.3	50.3	49.4	48.6	47.9	47.3	46.8	46.3	45.9	45.5	45.2	44.9	44.6	44.3	44.1	43.8	43.6	43.4	43.2	60
70	123.2	94.8	80.6	72.1	66.4	62.4	59.3	57.0	55.1	53.5	52.3	51.2	50.2	49.4	48.7	48.1	47.5	47.0	46.6	46.2	45.8	45.5	45.2	44.9	44.6	44.4	44.1	43.9	43.7	70
80	128.0	98.1	83.1	74.2	68.2	63.9	60.7	58.2	56.2	54.6	53.2	52.1	51.1	50.2	49.5	48.8	48.2	47.7	47.2	46.8	46.4	46.1	45.7	45.4	45.2	44.9	44.7	44.4	44.2	80
90	132.8	101.4	85.6	76.2	69.9	65.4	62.0	59.4	57.3	55.6	54.2	53.0	51.9	51.0	50.3	49.6	48.9	48.4	47.9	47.4	47.0	46.7	46.3	46.0	45.7	45.4	45.2	45.0	44.7	90
100	137.6	104.6	88.1	78.2	71.6	66.9	63.4	60.6	58.4	56.6	55.2	53.9	52.8	51.8	51.0	50.3	49.7	49.1	48.6	48.1	47.7	47.3	46.9	46.6	46.3	46.0	45.7	45.5	45.3	100
120	147.2	111.2	93.1	82.3	75.1	70.0	66.1	63.1	60.7	58.7	57.1	55.7	54.5	53.5	52.6	51.8	51.1	50.4	49.9	49.4	48.9	48.5	48.1	47.7	47.4	47.1	46.8	46.5	46.3	120
140	156.8	117.7	98.1	86.4	78.6	73.0	68.8	65.5	62.9	60.8	59.0	57.5	56.2	55.1	54.1	53.2	52.5	51.8	51.2	50.6	50.1	49.7	49.2	48.8	48.5	48.1	47.8	47.5	47.3	140
160	166.4	124.2	103.1	90.5	82.0	76.0	71.5	68.0	65.2	62.9	61.0	59.3	57.9	56.7	55.7	54.7	53.9	53.2	52.5	51.9	51.3	50.9	50.4	50.0	49.6	49.2	48.9	48.6	48.3	160
180	176.0	130.8	108.1	94.6	85.5	79.0	74.2	70.4	67.4	64.9	62.9	61.1	59.6	58.3	57.2	56.2	55.3	54.5	53.8	53.2	52.6	52.0	51.6	51.1	50.7	50.3	49.9	49.6	49.3	180
200	185.6	137.3	113.1	98.6	89.0	82.1	76.9	72.9	69.6	67.0	64.8	62.9	61.4	60.0	58.8	57.7	56.7	55.9	55.1	54.4	53.8	53.2	52.7	52.2	51.8	51.4	51.0	50.6	50.3	200
220	195.3	143.8	118.1	102.7	92.4	85.1	79.6	75.3	71.9	69.1	66.7	64.8	63.1	61.6	60.3	59.2	58.2	57.3	56.5	55.7	55.0	54.4	53.9	53.4	52.9	52.5	52.0	51.7	51.3	220
240	204.9	150.4	123.1	106.8	95.9	88.1	82.3	77.7	74.1	71.1	68.7	66.6	64.8	63.2	61.9	60.7	59.6	58.6	57.8	57.0	56.3	55.6	55.0	54.5	54.0	53.5	53.1	52.7	52.3	240
260	214.5	156.9	128.1	110.9	99.4	91.1	85.0	80.2	76.3	73.2	70.6	68.4	66.5	64.8	63.4	62.1	61.0	60.0	59.1	58.3	57.5	56.8	56.2	55.6	55.1	54.6	54.1	53.7	53.3	260
280	224.1	163.5	133.1	115.0	102.8	94.2	87.7	82.6	78.6	75.3	72.5	70.2	68.2	66.5	64.9	63.6	62.4	61.4	60.4	59.5	58.7	58.0	57.4	56.8	56.2	55.7	55.2	54.8	54.3	280
300	233.7	170.0	138.2	119.0	106.3	97.2	90.4	85.1	80.8	77.4	74.5	72.0	69.9	68.1	66.5	65.1	63.8	62.7	61.7	60.8	60.0	59.2	58.5	57.9	57.3	56.8	56.3	55.8	55.3	300
320	243.3	176.5	143.2	123.1	109.8	100.2	93.1	87.5	83.1	79.4	76.4	73.8	71.6	69.7	68.0	66.6	65.3	64.1	63.0	62.1	61.2	60.4	59.7	59.0	58.4	57.8	57.3	56.8	56.4	320
340	252.9	183.1	148.2	127.2	113.2	103.3	95.8	90.0	85.3	81.5	78.3	75.6	73.3	71.3	69.6	68.0	66.7	65.5	64.4	63.4	62.4	61.6	60.9	60.2	59.5	58.9	58.4	57.8	57.4	340
360	262.5	189.6	153.2	131.3	116.7	106.3	98.5	92.4	87.5	83.6	80.3	77.4	75.0	73.0	71.1	69.5	68.1	66.8	65.7	64.6	63.7	62.8	62.0	61.3	60.6	60.0	59.4	58.9	58.4	360
380	272.1	196.1	158.2	135.4	120.2	109.3	101.2	94.8	89.8	85.6	82.2	79.3	76.8	74.6	72.7	71.0	69.5	68.2	67.0	65.9	64.9	64.0	63.2	62.4	61.7	61.1	60.5	59.9	59.4	380
400	281.7	202.7	163.2	139.4	123.6	112.3	103.9	97.3	92.0	87.7	84.1	81.1	78.5	76.2	74.2	72.5	70.9	69.5	68.3	67.2	66.1	65.2	64.3	63.5	62.8	62.2	61.5	60.9	60.4	400
420	291.3	209.2	168.2	143.5	127.1	115.4	106.6	99.7	94.3	89.8	86.0	82.9	80.2	77.8	75.8	74.0	72.4	70.9	69.6	68.4	67.4	66.4	65.5	64.7	63.9	63.2	62.6	62.0	61.4	420
440	300.9	215.8	173.2	147.6	130.6	118.4	109.3	102.2	96.5	91.8	88.0	84.7	81.9	79.5	77.3	75.4	73.8	72.3	70.9	69.7	68.6	67.6	66.7	65.8	65.0	64.3	63.6	63.0	62.4	440
460	310.6	222.3	178.2	151.7	134.0	121.4	112.0	104.6	98.7	93.9	89.9	86.5	83.6	81.1	78.9	76.9	75.2	73.6	72.3	71.0	69.8	68.8	67.8	67.0	66.1	65.4	64.7	64.0	63.4	460
480	320.2	228.8	183.2	155.8	137.5	124.5	114.7	107.1	101.0	96.0	91.8	88.3	85.3	82.7	80.4	78.4	76.6	75.0	73.6	72.3	71.1	70.0	69.0	68.1	67.2	66.5	65.7	65.1	64.4	480
500	329.8	235.4	188.2	159.8	141.0	127.5	117.4	109.5	103.2	98.1	93.8	90.1	87.0	84.3	82.0	79.9	78.0	76.4	74.9	73.5	72.3	71.2	70.2	69.2	68.4	67.5	66.8	66.1	65.4	500
600	377.6	268.1	213.2	180.2	158.3	142.6	130.9	121.7	114.4	108.4	103.4	99.2	95.6	92.4	89.7	87.3	85.1	83.2	81.5	79.9	78.5	77.2	76.0	74.9	73.9	72.9	72.1	71.2	70.5	600
700	425.9	300.7	238.2	200.7	175.6	157.8	144.4	133.9	125.6	118.8	113.1	108.3	104.1	100.6	97.4	94.7	92.2	90.0	88.1	86.3	84.6	83.2	81.8	80.5	79.4	78.3	77.3	76.4	75.5	700
800	473.9	333.4	263.2	221.1	193.0	172.9	157.2	146.1	136.8	129.1	122.7	117.3	112.7	108.7	105.2	102.1	99.3	96.9	94.6	92.6	90.8	89.1	87.6	86.2	84.9	83.7	82.6	81.6	80.8	800
900	521.9	366.1	288.2	241.5	210.3	188.0	171.3	158.4	148.0	139.5	132.4	126.4	121.3	116.8	112.9	109.5	106.4	103.7	101.2	99.0	97.0	95.1	93.4	91.9	90.4	89.1	87.9	86.7	85.6	900
1000	570.0	398.8	313.2	261.9	227.6	203.2	184.8	170.6	159.2	149.8	142.0	135.5	129.8	124.9	120.6	116.9	113.5	110.5	107.8	105.4	103.1	101.1	99.2	97.5	96.0	94.5	93.1	91.9	90.7	1000
1100	618.0	431.5	338.2	282.3	245.0	218.3	198.3	182.8	170.3	160.2	151.7	144.5	138.4	133.0	128.4	124.3	120.6	117.3	114.4	111.7	109.3	107.1	105.1	103.2	101.5	99.9	98.4	97.0	95.7	1100
1200	666.1	464.2	363.2	302.7	262.3	233.4	211.8	195.0	181.5	170.5	161.4	153.6	146.9	141.2	136.1	131.7	127.7	124.2	121.0	118.1	115.5	113.1	110.9	108.9	107.0	105.3	103.7	102.2	100.8	1200
1300	714.1	496.9	388.3	323.1	279.6	248.6	225.3	207.2	192.7	180.9	171.0	162.6	155.5	149.3	143.8	139.0	134.8	131.0	127.6	124.4	121.6	119.1	116.7	114.5	112.5	110.7	108.9	107.3	105.8	1300
1400	762.1	529.6	413.3	343.5	297.0	263.7	238.8	219.4	203.9	191.2	180.7	171.7	164.0	157.4	151.6	146.4	141.9	137.8	134.1	130.8	127.8	125.0	122.5	120.2	118.0	116.0	114.2	112.5	110.9	1400
1500	810.2	562.2	438.3	363.9	314.3	278.9	252.3	231.6	215.1	201.6	190.3	180.8	172.6	165.5	159.3	153.8	149.0	144.6	140.7	137.2	134.0	131.0	128.3	125.8	123.6	121.4	119.5	117.6	115.9	1500
Term. 2/	89.560	71.935	63.120	57.830	54.305	51.790	49.900	48.430	47.255	46.295	45.495	44.815	44.235	43.730	43.290	42.905	42.555	42.245	41.970	41.715	41.485	41.280	41.085	40.910	40.750	40.595	40.455	40.325	40.205	Term. 2/
L. H. 3/	.48042	.32687	.25010	.20403	.17332	.15138	.13493	.12214	.11190	.10352	.09655	.09064	.08558	.08119	.07735	.07396	.07095	.06826	.06584	.06364	.06165	.05983	.05816	.05662	.05520	.05389	.05267	.05154	.05048	L. H. 3/

1/ Based on a tare weight of 22.0 tons and a ratio of empty car miles to loaded car miles of 0.341. The Less-carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.
For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.23.
For Cost Level III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.33.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.
See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 10 - Mountain Pacific

BOX CARS

5378

TABLE 64.—TERRITORY NO. 10 - MOUNTAIN PACIFIC

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.2	16.8	14.5	12.7	11.3	10.1	9.2	8.5	7.8	7.3	6.8	6.4	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	10
20	21.1	17.6	15.1	13.2	11.8	10.6	9.7	8.9	8.2	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	20
30	21.9	17.3	15.7	13.8	12.3	11.1	10.1	9.3	8.6	8.0	7.5	7.0	6.6	6.3	5.9	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	30
40	22.8	19.0	16.4	14.4	12.8	11.6	10.5	9.7	9.0	8.3	7.8	7.3	6.9	6.6	6.2	5.9	5.7	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.1	3.9	3.8	3.7	3.6	40
50	23.7	19.8	17.0	14.9	13.3	12.0	11.0	10.1	9.3	8.7	8.2	7.7	7.2	6.9	6.5	6.2	5.9	5.7	5.5	5.2	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.0	3.9	3.8	50
60	24.5	20.5	17.7	15.5	13.8	12.5	11.4	10.5	9.7	9.1	8.5	8.0	7.6	7.2	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.4	4.2	4.1	4.0	60
70	25.4	21.3	18.3	16.1	14.4	13.0	11.8	10.9	10.1	9.4	8.8	8.3	7.9	7.5	7.1	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.2	5.0	4.8	4.7	4.6	4.4	4.3	4.2	70
80	26.3	22.0	18.9	16.7	14.9	13.4	12.3	11.3	10.5	9.8	9.2	8.6	8.2	7.8	7.4	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.4	80
90	27.1	22.7	19.6	17.2	15.4	13.9	12.7	11.7	10.9	10.1	9.5	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.8	4.7	4.6	90
100	28.0	23.5	20.2	17.8	15.9	14.4	13.2	12.1	11.3	10.5	9.9	9.3	8.8	8.4	8.0	7.6	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.7	5.5	5.3	5.2	5.0	4.9	4.8	100
120	29.7	24.9	21.5	18.9	16.9	15.3	14.0	12.9	12.0	11.2	10.5	9.9	9.4	8.9	8.5	8.1	7.8	7.5	7.2	7.0	6.7	6.5	6.3	6.1	5.9	5.8	5.6	5.5	5.3	5.2	120
140	31.4	26.4	22.8	20.1	18.0	16.3	14.9	13.8	12.8	12.0	11.2	10.6	10.0	9.5	9.1	8.7	8.3	8.0	7.7	7.4	7.2	7.0	6.7	6.5	6.3	6.2	6.0	5.9	5.7	5.6	140
160	33.2	27.9	24.1	21.2	19.0	17.2	15.8	14.6	13.5	12.7	11.9	11.2	10.7	10.1	9.7	9.3	8.9	8.5	8.2	7.9	7.7	7.4	7.2	7.0	6.8	6.6	6.4	6.3	6.1	6.0	160
180	34.9	29.3	25.3	22.4	20.0	18.2	16.7	15.4	14.3	13.4	12.6	11.9	11.3	10.7	10.2	9.8	9.4	9.0	8.7	8.4	8.1	7.9	7.6	7.4	7.2	7.0	6.8	6.7	6.5	6.4	180
200	36.6	30.8	26.6	23.5	21.1	19.1	17.5	16.2	15.1	14.1	13.3	12.6	11.9	11.3	10.8	10.4	9.9	9.6	9.2	8.9	8.6	8.3	8.1	7.9	7.6	7.4	7.3	7.1	6.9	6.8	200
220	38.4	32.3	27.9	24.6	22.1	20.1	18.4	17.0	15.8	14.8	14.0	13.2	12.5	11.9	11.4	10.9	10.5	10.1	9.7	9.4	9.1	8.8	8.5	8.3	8.1	7.9	7.7	7.5	7.3	7.1	220
240	40.1	33.7	29.2	25.8	23.1	21.0	19.3	17.8	16.6	15.6	14.6	13.9	13.2	12.5	12.0	11.5	11.0	10.6	10.2	9.9	9.6	9.3	9.0	8.7	8.5	8.3	8.1	7.9	7.7	7.5	240
260	41.8	35.2	30.5	26.9	24.2	22.0	20.2	18.6	17.4	16.3	15.3	14.5	13.8	13.1	12.5	12.0	11.5	11.1	10.7	10.4	10.0	9.7	9.4	9.2	8.9	8.7	8.5	8.3	8.1	7.9	260
280	43.6	36.7	31.8	28.1	25.2	22.9	21.0	19.5	18.1	17.0	16.0	15.2	14.4	13.7	13.1	12.6	12.1	11.6	11.2	10.9	10.5	10.2	9.9	9.6	9.4	9.1	8.9	8.7	8.5	8.3	280
300	45.3	38.1	33.0	29.2	26.2	23.8	21.9	20.3	18.9	17.7	16.7	15.8	15.0	14.3	13.7	13.1	12.6	12.1	11.7	11.3	11.0	10.6	10.3	10.1	9.8	9.5	9.3	9.1	8.9	8.7	300
320	47.0	39.6	34.3	30.4	27.3	24.8	22.8	21.1	19.7	18.4	17.4	16.5	15.6	14.9	14.3	13.7	13.1	12.7	12.2	11.8	11.5	11.1	10.8	10.5	10.2	10.0	9.7	9.5	9.3	9.1	320
340	48.8	41.1	35.6	31.5	28.3	25.7	23.6	21.9	20.4	19.2	18.1	17.1	16.3	15.5	14.8	14.2	13.7	13.2	12.7	12.3	11.9	11.6	11.2	10.9	10.7	10.4	10.1	9.9	9.7	9.5	340
360	50.5	42.6	36.9	32.6	29.3	26.7	24.5	22.7	21.2	19.9	18.7	17.8	16.9	16.1	15.4	14.8	14.2	13.7	13.2	12.8	12.4	12.0	11.7	11.4	11.1	10.8	10.6	10.3	10.1	9.9	360
380	52.2	44.0	38.2	33.8	30.4	27.6	25.4	23.5	22.0	20.6	19.4	18.4	17.5	16.7	16.0	15.3	14.7	14.2	13.7	13.3	12.9	12.5	12.1	11.8	11.5	11.2	11.0	10.7	10.5	10.3	380
400	54.0	45.5	39.5	34.9	31.4	28.6	26.3	24.3	22.7	21.3	20.1	19.1	18.1	17.3	16.6	15.9	15.3	14.7	14.2	13.8	13.4	13.0	12.6	12.3	12.0	11.7	11.4	11.1	10.9	10.7	400
420	55.7	47.0	40.7	36.1	32.4	29.5	27.1	25.2	23.5	22.0	20.8	19.7	18.7	17.9	17.1	16.4	15.8	15.3	14.7	14.3	13.8	13.4	13.0	12.7	12.4	12.1	11.8	11.5	11.3	11.1	420
440	57.4	48.4	42.0	37.2	33.5	30.5	28.0	26.0	24.2	22.8	21.5	20.4	19.4	18.5	17.7	17.0	16.4	15.8	15.2	14.7	14.3	13.9	13.5	13.1	12.8	12.5	12.2	11.9	11.7	11.4	440
460	59.1	49.9	43.3	38.3	34.5	31.4	28.9	26.8	25.0	23.5	22.2	21.0	20.0	19.1	18.3	17.5	16.9	16.3	15.7	15.2	14.8	14.3	14.0	13.6	13.2	12.9	12.6	12.3	12.1	11.8	460
480	60.9	51.4	44.6	39.5	35.5	32.4	29.8	27.6	25.8	24.2	22.9	21.7	20.6	19.7	18.8	18.1	17.4	16.8	16.2	15.7	15.2	14.8	14.4	14.0	13.7	13.3	13.0	12.8	12.5	12.2	480
500	62.6	52.8	45.9	40.6	36.6	33.3	30.6	28.4	26.5	24.9	23.5	22.3	21.2	20.3	19.4	18.7	18.0	17.3	16.7	16.2	15.7	15.3	14.9	14.5	14.1	13.8	13.5	13.2	12.9	12.6	500
600	71.3	60.2	52.3	46.3	41.7	38.0	35.0	32.5	30.4	28.5	27.0	25.6	24.3	23.3	22.3	21.4	20.6	19.9	19.2	18.6	18.1	17.6	17.1	16.7	16.3	15.9	15.5	15.2	14.9	14.6	600
700	79.9	67.5	58.7	52.0	46.9	42.8	39.4	36.6	34.2	32.1	30.4	28.8	27.5	26.2	25.2	24.2	23.3	22.5	21.8	21.1	20.5	19.9	19.4	18.9	18.4	18.0	17.6	17.2	16.9	16.5	700
800	88.6	74.9	65.1	57.8	52.1	47.5	43.8	40.6	38.0	35.7	33.8	32.1	30.6	29.2	28.0	26.9	26.0	25.1	24.3	23.5	22.8	22.2	21.6	21.1	20.6	20.1	19.7	19.2	18.9	18.5	800
900	97.2	82.2	71.5	63.5	57.2	52.2	48.1	44.7	41.8	39.4	37.2	35.3	33.7	32.2	30.9	29.7	28.6	27.7	26.8	26.0	25.2	24.5	23.9	23.3	22.7	22.2	21.7	21.3	20.8	20.4	900
1000	105.9	89.6	77.9	69.2	62.4	56.9	52.5	48.8	45.6	43.0	40.6	38.6	36.8	35.2	33.8	32.5	31.3	30.2	29.3	28.4	27.6	26.8	26.1	25.5	24.9	24.3	23.8	23.3	22.8	22.4	1000
1100	114.5	96.9	84.3	74.9	67.5	61.7	56.9	52.9	49.5	46.6	44.0	41.8	39.9	38.2	36.6	35.2	34.0	32.8	31.8	30.8	29.9	29.1	28.4	27.7	27.0	26.4	25.9	25.3	24.8	24.3	1100
1200	123.2	104.3	90.7	80.6	72.7	66.4	61.2	56.9	53.3	50.2	47.5	45.1	43.0	41.2	39.5	38.0	36.6	35.4	34.3	33.3	32.3	31.4	30.6	29.9	29.2	28.5	27.9	27.3	26.8	26.3	1200
1300	131.8	111.6	97.1	86.3	77.9	71.1	65.6	61.0	57.1	53.8	50.9	48.4	46.1	44.1	42.4	40.8	39.3	38.0	36.8	35.7	34.7	33.8	32.9	32.1	31.3	30.6	30.0	29.4	28.8	28.3	1300
1400	140.5	119.0	103.6	92.0	83.0	75.9	70.0	65.1	60.9	57.4	54.3	51.6	49.2	47.1	45.2	43.5	42.0	40.6	39.3	38.1	37.1	36.1	35.1	34.3	33.5	32.8	32.1	31.4	30.8	30.2	1400
1500	149.2	126.3	110.0	97.7	88.2	80.6	74.3	69.1	64.8	61.0	57.7	54.9	52.3	50.1	48.1	46.3	44.7	43.2	41.8	40.6	39.4	38.4	37.4	36.5	35.6	34.9	34.1	33.4	32.8	32.2	1500
1600	157.8	133.6	116.4	103.4	93.4	85.3	78.7	73.2	68.6	64.6	61.1	58.1	55.5	53.1	51.0	49.1	47.3	45.8	44.3	43.0	41.8	40.7	39.7	38.7	37.8	37.0	36.2	35.5	34.8	34.1	1600
1700	166.5	141.0	122.8	109.1	98.5	90.0	83.1	77.3	72.4	68.2	64.6	61.4	58.6	56.1	53.8	51.8	50.0	48.3	46.8	45.4	44.2	43.0	41.9	40.9	40.0	39.1	38.3	37.5	36.8	36.1	1700
1800	175.1	148.3	129.2	114.9	103.7	94.8	87.5	81.4	76.2	71.8	68.0	64.6	61.7	59.0	56.7	54.6	52.7	50.9	49.3	47.9	46.5	45.3	44.2	43.1	42.1	41.2	40.3	39.5	38.8	38.0	1800
1900	183.8	155.7	135.6	120.6	108.9	99.5	91.8	85.4	80.0	75.4	71.4	67.9	64.8	62.0	59.6	57.3	55.3	53.5	51.8	50.3	48.9	47.6	46.4	45.3	44.3	43.3	42.4	41.5	40.7	40.0	1900
2000	192.4	163.0	142.0	126.3	114.0	104.2	96.2	89.5	83.9	79.0	74.8	71.1	67.9	65.0	62.4	60.1	58.0	56.1	54.4	52.8	51.3	49.9	48.7	47.5	46.4	45.4	44.5	43.6	42.7	41.9	2000
2100	201.1	170.4	148.4	132.0	119.2	108.9	100.6	93.6	87.7	82.6	78.2	74.4	71.0	68.0	65.3	62.9	60.7	58.7	56.9	55.2	53.7	52.2	50.9	49.7	48.6	47.5	46.5	45.6	44.7	43.9	2100
2200	209.7	177.7	154.8	137.7	124.3	113.7	104.9	97.7	91.5	86.2	81.6	77.6	74.1	71.0	68.2	65.6	63.3	61.3	59.4	57.6	56.0	54.6	53.2	51.9	50.7	49.6	48.6	47.6	46.7	45.9	2200
2300	218.4	185.1	161.3	143.4	129.5	118.4	109.3	101.7	95.3	89.8	85.1	80.9	77.2	74.0	71.0	68.4	66.0	63.9	61.9	60.0	58.4	56.9	55.4	54.1	52.9	51.7	50.7	49.6	48.7	47.8	2300
2400	227.1	192.4	167.7	149.1	134.7	123.1	113.7	105.8	99.1	93.4	88.5	84.2	80.3	76.9	73.9	71.2	68.7	66.4	64.4	62.5	60.8	59.2	57.7	56.3	55.0	53.8	52.7	51.7	50.7	49.8	2400
Term. 2/	19.332	16.110	13.809	12.083	10.740	9.666	8.787	8.055	7.435	6.904	6.444	6.041	5.686	5.370	5.087	4.833	4.603	4.394	4.203	4.028	3.866	3.718	3.580	3.452	3.333	3.222	3.118	3.021	2.929	2.843	Term. 2/
L. H. 3/	.086550	.073458	.064107	.057094	.051639	.047275	.043705	.040729	.038212	.036054	.034183	.032547	.031103	.029819	.028671	.027638	.026702	.025852	.025076	.024365	.023710	.023106	.022546	.022027	.021543	.021092	.020669	.020273	.019902	.019551	L. H. 3/

1/ Based on a tare weight of 22.7 tons and a ratio of empty car miles to loaded car miles of 0.333. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.23.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.33.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.55.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.71.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 64 (Concluded).—TERRITORY NO. 10 - MOUNTAIN PACIFIC

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	10
20	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	20
30	3.3	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	30
40	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	40
50	3.7	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	50
60	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	60
70	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	70
80	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	80
90	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	90
100	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	2.9	100
120	5.1	5.0	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	120
140	5.5	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	140
160	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	160
180	6.2	6.1	6.0	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.1	180
200	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	200
220	7.0	6.8	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	220
240	7.4	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	5.0	4.9	240
260	7.8	7.6	7.5	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.3	5.2	5.2	260
280	8.1	8.0	7.8	7.7	7.5	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.6	5.5	5.5	280
300	8.5	8.4	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.9	5.8	5.8	300
320	8.9	8.7	8.6	8.4	8.3	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	320
340	9.3	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.6	6.5	6.4	6.4	6.3	340
360	9.7	9.5	9.3	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.8	6.7	6.7	6.6	360
380	10.1	9.9	9.7	9.5	9.3	9.2	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.9	380
400	10.5	10.2	10.1	9.9	9.7	9.5	9.4	9.2	9.1	9.0	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.2	400
420	10.8	10.6	10.4	10.2	10.1	9.9	9.7	9.6	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7	7.6	7.6	7.5	7.4	420
440	11.2	11.0	10.8	10.6	10.4	10.3	10.1	9.9	9.8	9.6	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.0	7.9	7.9	7.8	7.7	440
460	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.5	8.4	8.3	8.2	8.2	8.1	8.0	460
480	12.0	11.8	11.5	11.3	11.2	11.0	10.8	10.6	10.5	10.3	10.2	10.0	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.8	8.7	8.6	8.5	8.4	8.4	8.3	480
500	12.4	12.1	11.9	11.7	11.5	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.2	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.1	9.0	8.9	8.8	8.7	8.7	8.6	500
600	14.3	14.0	13.8	13.5	13.3	13.1	12.9	12.7	12.5	12.4	12.2	12.0	11.9	11.7	11.6	11.4	11.3	11.2	11.1	11.0	10.8	10.7	10.6	10.5	10.4	10.3	10.2	10.2	10.1	10.0	600
700	16.2	15.9	15.6	15.4	15.1	14.9	14.7	14.4	14.2	14.0	13.9	13.7	13.5	13.3	13.2	13.0	12.9	12.7	12.6	12.5	12.4	12.2	12.1	12.0	11.9	11.8	11.7	11.6	11.5	11.4	700
800	18.1	17.8	17.5	17.2	16.9	16.7	16.4	16.2	16.0	15.7	15.5	15.3	15.3	15.0	14.8	14.6	14.5	14.3	14.2	14.0	13.9	13.7	13.6	13.5	13.4	13.2	13.1	13.0	12.9	12.8	800
900	20.1	19.7	19.4	19.0	18.7	18.5	18.2	17.9	17.7	17.4	17.2	17.0	16.8	16.6	16.4	16.2	16.0	15.9	15.7	15.5	15.4	15.2	15.1	15.0	14.8	14.7	14.6	14.5	14.3	14.2	900
1000	22.0	21.6	21.2	20.9	20.5	20.2	19.9	19.7	19.4	19.1	18.9	18.6	18.4	18.2	18.0	17.8	17.6	17.4	17.2	17.1	16.9	16.7	16.6	16.4	16.3	16.2	16.0	15.9	15.8	15.6	1000
1100	23.9	23.5	23.1	22.7	22.4	22.0	21.7	21.4	21.2	20.8	20.5	20.3	20.0	19.8	19.6	19.4	19.2	19.0	18.8	18.6	18.4	18.2	18.1	17.9	17.8	17.6	17.5	17.3	17.2	17.1	1100
1200	25.8	25.4	25.0	24.5	24.2	23.8	23.5	23.1	22.8	22.5	22.2	21.9	21.7	21.4	21.2	21.0	20.7	20.5	20.3	20.1	19.9	19.7	19.6	19.4	19.2	19.1	18.9	18.8	18.6	18.5	1200
1300	27.7	27.3	26.8	26.4	26.0	25.6	25.2	24.9	24.5	24.2	23.9	23.6	23.3	23.1	22.8	22.5	22.2	22.1	21.9	21.6	21.4	21.2	21.1	20.9	20.7	20.5	20.4	20.2	20.0	19.9	1300
1400	29.7	29.2	28.7	28.2	27.8	27.4	27.0	26.6	26.2	25.9	25.6	25.3	25.0	24.7	24.4	24.1	23.9	23.6	23.4	23.2	23.0	22.7	22.5	22.3	22.2	22.0	21.8	21.6	21.5	21.3	1400
1500	31.6	31.1	30.5	30.0	29.6	29.1	28.7	28.3	27.9	27.6	27.2	26.9	26.6	26.3	26.0	25.7	25.4	25.2	24.9	24.7	24.5	24.2	24.0	23.8	23.6	23.4	23.2	23.1	22.9	22.7	1500
1600	33.5	32.9	32.4	31.9	31.4	30.9	30.5	30.1	29.7	29.3	28.9	28.6	28.2	27.9	27.6	27.3	27.0	26.7	26.5	26.2	26.0	25.7	25.5	25.3	25.1	24.9	24.7	24.5	24.3	24.1	1600
1700	35.4	34.8	34.3	33.7	33.2	32.7	32.2	31.8	31.4	31.0	30.6	30.2	29.9	29.5	29.2	28.9	28.6	28.3	28.0	27.8	27.5	27.2	27.0	26.8	26.6	26.3	26.1	25.9	25.7	25.5	1700
1800	37.4	36.7	36.1	35.5	35.0	34.5	34.0	33.5	33.1	32.7	32.3	31.9	31.5	31.1	30.8	30.5	30.2	29.9	29.6	29.3	29.0	28.7	28.5	28.3	28.0	27.8	27.6	7.4	27.2	27.0	1800
1900	39.3	38.6	38.0	37.4	36.8	36.3	35.8	35.3	34.8	34.4	33.9	33.5	33.1	32.8	32.4	32.1	31.7	31.4	31.1	30.8	30.5	30.3	30.0	29.7	29.5	29.2	29.0	8.8	28.6	28.4	1900
2000	41.2	40.5	39.8	39.2	38.6	38.1	37.5	37.0	36.5	36.0	35.6	35.2	34.8	34.4	34.0	33.6	33.3	33.0	32.6	32.3	32.0	31.8	31.5	31.2	31.0	30.7	30.5	0.2	30.0	29.8	2000
2100	43.1	42.4	41.7	41.0	40.4	39.8	39.3	38.7	38.2	37.7	37.3	36.8	36.4	36.0	35.6	35.2	34.9	34.5	34.2	33.9	33.6	33.3	33.0	32.7	32.4	32.2	31.9	31.7	31.4	31.2	2100
2200	45.0	44.3	43.6	42.9	42.2	41.6	41.0	40.5	39.9	39.4	38.9	38.5	38.0	37.6	37.2	36.8	36.4	36.1	35.7	35.4	35.1	34.8	34.5	34.2	33.9	33.6	33.4	33.1	32.8	32.6	2200
2300	47.0	46.2	45.4	44.7	44.0	43.4	42.8	42.2	41.7	41.1	40.6	40.1	39.7	39.2	38.8	38.4	38.0	37.6	37.3	36.9	36.6	36.3	35.9	35.6	35.3	35.1	34.8	34.5	34.3	34.0	2300
2400	48.9	48.1	47.3	46.6	45.8	45.2	44.5	43.9	43.4	42.8	42.3	41.8	41.3	40.9	40.4	40.0	39.6	39.2	38.8	38.4	38.1	37.8	37.4	37.1	36.8	36.5	36.2	36.0	35.7	35.4	2400
Term. 2/	2.762	2.685	2.612	2.544	2.478	2.417	2.358	2.301	2.248	2.197	2.148	2.101	2.057	2.014	1.973	1.933	1.895	1.859	1.824	1.790	1.757	1.726	1.696	1.667	1.638	1.611	1.585	1.559	1.534	1.510	Term. 2/
L. H. 3/	.019221	.018910	.018615	.018336	.018071	.017819	.017579	.017351	.017134	.016926	.016728	.016538	.016356	.016182	.016015	.015855	.015701	.015553	.015410	.015273	.015141	.015013	.014890	.014772	.014657	.014546	.014439	.014335	.014234	.014137	L. H. 3/

1/ Based on a tare weight of 22.7 tons and a ratio of empty car miles to loaded car miles of 0.333. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.23.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.33.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.55.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.71.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage expenses per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 10 - Mountain Pacific

FLAT CARS

TABLE 65.—TERRITORY NO. 10 - MOUNTAIN PACIFIC

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																														Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.3	16.9	14.5	12.7	11.3	10.2	9.3	8.5	7.8	7.3	6.8	6.4	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	10
20	21.2	17.7	15.2	13.3	11.8	10.7	9.7	8.9	8.2	7.7	7.2	6.7	6.3	6.0	5.7	5.4	5.2	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.4	3.3	3.3	20
30	22.1	18.5	15.9	13.9	12.4	11.2	10.2	9.4	8.7	8.1	7.5	7.1	6.7	6.3	6.0	5.7	5.5	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	3.5	30
40	23.1	19.3	16.6	14.5	13.0	11.7	10.7	9.8	9.1	8.4	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	3.7	40
50	24.0	20.1	17.2	15.1	13.5	12.2	11.1	10.2	9.5	8.8	8.3	7.8	7.3	7.0	6.6	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9	50
60	24.9	20.8	17.9	15.8	14.1	12.7	11.6	10.7	9.9	9.2	8.6	8.1	7.7	7.3	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.6	4.4	4.3	4.2	4.1	60
70	25.9	21.6	18.6	16.4	14.6	13.2	12.1	11.1	10.3	9.6	9.0	8.5	8.0	7.6	7.2	6.9	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.4	4.3	70
80	26.8	22.4	19.3	17.0	15.2	13.7	12.5	11.5	10.7	10.0	9.4	8.8	8.3	7.9	7.5	7.2	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.9	4.7	4.6	4.5	80
90	27.7	23.2	20.0	17.6	15.7	14.2	13.0	12.0	11.1	10.4	9.7	9.2	8.7	8.2	7.8	7.5	7.1	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	4.7	90
100	28.6	24.0	20.7	18.2	16.3	14.7	13.5	12.4	11.5	10.7	10.1	9.5	9.0	8.5	8.1	7.8	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.2	5.0	4.9	100
120	30.5	25.6	22.1	19.4	17.4	15.7	14.4	13.3	12.3	11.5	10.8	10.2	9.7	9.2	8.7	8.3	8.0	7.7	7.4	7.1	6.9	6.6	6.4	6.2	6.1	5.9	5.7	5.6	5.4	5.3	120
140	32.4	27.2	23.4	20.7	18.5	16.7	15.3	14.1	13.1	12.3	11.5	10.9	10.3	9.8	9.3	8.9	8.6	8.2	7.9	7.6	7.4	7.1	6.9	6.7	6.5	6.3	6.2	6.0	5.9	5.7	140
160	34.2	28.7	24.8	21.9	19.6	17.8	16.3	15.0	14.0	13.0	12.3	11.6	11.0	10.4	10.0	9.5	9.1	8.8	8.4	8.1	7.9	7.6	7.4	7.2	7.0	6.8	6.6	6.4	6.3	6.2	160
180	36.1	30.3	26.2	23.1	20.7	18.8	17.2	15.9	14.8	13.8	13.0	12.3	11.6	11.1	10.6	10.1	9.7	9.3	9.0	8.7	8.4	8.1	7.9	7.6	7.4	7.2	7.0	6.9	6.7	6.5	180
200	38.0	31.9	27.6	24.3	21.8	19.8	18.1	16.7	15.6	14.6	13.7	13.0	12.3	11.7	11.2	10.7	10.3	9.9	9.5	9.2	8.9	8.6	8.3	8.1	7.9	7.7	7.5	7.3	7.1	6.9	200
220	39.8	33.5	28.9	25.5	22.9	20.8	19.1	17.6	16.4	15.4	14.4	13.7	13.0	12.3	11.8	11.3	10.8	10.4	10.0	9.7	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.4	220
240	41.7	35.1	30.3	26.8	24.0	21.8	20.0	18.5	17.2	16.1	15.2	14.3	13.6	13.0	12.4	11.9	11.4	11.0	10.6	10.2	9.9	9.6	9.3	9.0	8.8	8.5	8.3	8.1	7.9	7.8	240
260	43.5	36.6	31.7	28.0	25.1	22.8	20.9	19.4	18.0	16.9	15.9	15.0	14.3	13.6	13.0	12.4	12.0	11.5	11.1	10.7	10.4	10.1	9.8	9.5	9.2	9.0	8.8	8.6	8.4	8.2	260
280	45.4	38.2	33.1	29.2	26.2	23.8	21.9	20.2	18.8	17.7	16.6	15.7	14.9	14.2	13.6	13.0	12.5	12.1	11.6	11.2	10.9	10.5	10.2	9.9	9.7	9.4	9.2	9.0	8.8	8.6	280
300	47.3	39.8	34.5	30.4	27.3	24.8	22.8	21.1	19.7	18.4	17.4	16.4	15.6	14.9	14.2	13.6	13.1	12.6	12.2	11.7	11.4	11.0	10.7	10.4	10.1	9.9	9.6	9.4	9.2	9.0	300
320	49.1	41.4	35.8	31.7	28.4	25.8	23.7	22.0	20.5	19.2	18.1	17.1	16.3	15.5	14.8	14.2	13.6	13.1	12.7	12.3	11.9	11.5	11.2	10.9	10.6	10.3	10.1	9.8	9.6	9.4	320
340	51.0	43.0	37.2	32.9	29.5	26.9	24.7	22.8	21.3	20.0	18.8	17.8	16.9	16.1	15.4	14.8	14.2	13.7	13.2	12.8	12.4	12.0	11.7	11.3	11.0	10.8	10.5	10.3	10.0	9.8	340
360	52.9	44.5	38.6	34.1	30.6	27.9	25.6	23.7	22.1	20.7	19.5	18.5	17.6	16.8	16.0	15.4	14.8	14.2	13.7	13.3	12.9	12.5	12.1	11.8	11.5	11.2	10.9	10.7	10.5	10.2	360
380	54.7	46.1	40.0	35.3	31.8	28.9	26.5	24.6	22.9	21.5	20.3	19.2	18.2	17.4	16.6	16.0	15.3	14.8	14.3	13.8	13.4	13.0	12.6	12.3	12.0	11.7	11.4	11.1	10.9	10.6	380
400	56.6	47.7	41.3	36.6	32.9	29.9	27.5	25.4	23.7	22.3	21.0	19.9	18.9	18.0	17.2	16.5	15.9	15.3	14.8	14.3	13.9	13.5	13.1	12.7	12.4	12.1	11.8	11.5	11.3	11.1	400
420	58.4	49.3	42.7	37.8	34.0	30.9	28.4	26.3	24.5	23.0	21.7	20.6	19.6	18.7	17.9	17.1	16.5	15.9	15.3	14.8	14.4	14.0	13.6	13.2	12.9	12.5	12.2	12.0	11.7	11.5	420
440	60.3	50.8	44.1	39.0	35.1	31.9	29.3	27.2	25.4	23.8	22.4	21.3	20.2	19.3	18.5	17.7	17.0	16.4	15.9	15.4	14.9	14.4	14.0	13.7	13.3	13.0	12.7	12.4	12.1	11.9	440
460	62.2	52.4	45.5	40.2	36.2	32.9	30.3	28.1	26.2	24.6	23.2	22.0	20.9	19.9	19.1	18.3	17.6	17.0	16.4	15.9	15.4	14.9	14.5	14.1	13.8	13.4	13.1	12.8	12.5	12.3	460
480	64.0	54.0	46.8	41.5	37.3	33.9	31.2	28.9	27.0	25.3	23.9	22.7	21.5	20.6	19.7	18.9	18.2	17.5	16.9	16.4	15.9	15.4	15.0	14.6	14.2	13.9	13.5	13.2	13.0	12.7	480
500	65.9	55.6	48.2	42.7	38.4	34.9	32.1	29.8	27.8	26.1	24.6	23.3	22.2	21.2	20.3	19.5	18.7	18.1	17.5	16.9	16.4	15.9	15.5	15.1	14.7	14.3	14.0	13.7	13.4	13.1	500
600	75.2	63.5	55.1	48.8	43.9	40.0	36.8	34.1	31.9	29.9	28.3	26.8	25.5	24.4	23.3	22.4	21.6	20.8	20.1	19.5	18.9	18.3	17.8	17.4	16.9	16.5	16.2	15.8	15.5	15.2	600
700	84.5	71.4	62.0	54.9	49.4	45.1	41.5	38.5	36.0	33.8	31.9	30.3	28.8	27.5	26.4	25.3	24.4	23.5	22.8	22.0	21.4	20.8	20.2	19.7	19.2	18.8	18.3	17.9	17.6	17.2	700
800	93.8	79.3	68.9	61.0	55.0	50.1	46.1	42.8	40.0	37.6	35.5	33.7	32.1	30.7	29.4	28.3	27.2	26.3	25.4	24.6	23.9	23.2	22.6	22.0	21.5	21.0	20.5	20.1	19.6	19.3	800
900	103.1	87.2	75.7	67.2	60.5	55.2	50.8	47.2	44.1	41.5	39.2	37.2	35.4	33.9	32.4	31.2	30.0	29.0	28.1	27.2	26.4	25.7	25.0	24.3	23.7	23.2	22.7	22.2	21.7	21.3	900
1000	112.5	95.1	82.6	73.3	66.0	60.2	55.5	51.5	48.2	45.3	42.8	40.6	38.7	37.0	35.5	34.1	32.9	31.7	30.7	29.8	28.9	28.1	27.3	26.7	26.0	25.4	24.8	24.3	23.8	23.4	1000
1100	121.8	102.9	89.5	79.4	71.6	65.3	60.2	55.9	52.3	49.1	46.5	44.1	42.0	40.2	38.5	37.0	35.7	34.5	33.4	32.3	31.4	30.5	29.7	29.0	28.3	27.6	27.0	26.5	25.9	25.4	1100
1200	131.1	110.8	96.4	85.5	77.1	70.3	64.8	60.2	56.3	53.0	50.1	47.6	45.3	43.3	41.6	40.0	38.5	37.2	36.0	34.9	33.9	33.0	32.1	31.3	30.5	29.8	29.2	28.6	28.0	27.5	1200
1300	140.4	118.7	103.3	91.7	82.6	75.4	69.5	64.6	60.4	56.8	53.7	51.0	48.6	46.5	44.6	42.9	41.4	39.9	38.7	37.5	36.4	35.4	34.5	33.6	32.8	32.1	31.4	30.7	30.1	29.5	1300
1400	149.7	126.6	110.1	97.8	88.2	80.5	74.2	68.9	64.5	60.7	57.4	54.5	51.9	49.7	47.7	45.8	44.2	42.7	41.3	40.1	38.9	37.8	36.9	35.9	35.1	34.3	33.5	32.8	32.2	31.6	1400
1500	159.0	134.5	117.0	103.9	93.7	85.5	78.8	73.3	68.5	64.5	61.0	57.9	55.2	52.8	50.7	48.8	47.0	45.4	44.0	42.6	41.4	40.3	39.2	38.3	37.4	36.5	35.7	35.0	34.3	33.6	1500
1600	168.3	142.4	123.9	110.0	99.2	90.6	83.5	77.6	72.6	68.4	64.6	61.4	58.5	56.0	53.7	51.7	49.8	48.2	46.6	45.2	43.9	42.7	41.6	40.6	39.6	38.7	37.9	37.1	36.4	35.7	1600
1700	177.7	150.3	130.8	116.1	104.7	95.6	88.2	82.0	76.7	72.2	68.3	64.9	61.9	59.2	56.8	54.6	52.7	50.9	49.3	47.8	46.4	45.1	44.0	42.9	41.9	40.9	40.1	39.2	38.5	37.7	1700
1800	187.0	158.2	137.7	122.3	110.3	100.7	92.9	86.3	80.8	76.0	71.9	68.3	65.2	62.3	59.8	57.5	55.5	53.6	51.9	50.4	48.9	47.6	46.4	45.2	44.2	43.2	42.2	41.4	40.5	39.8	1800
1900	196.3	166.1	144.5	128.4	115.8	105.7	97.5	90.6	84.8	79.9	75.6	71.8	68.5	65.5	62.9	60.5	58.3	56.4	54.6	52.9	51.4	50.0	48.7	47.5	46.4	45.4	44.4	43.5	42.6	41.8	1900
2000	205.6	174.0	151.4	134.5	121.3	110.8	102.2	95.0	88.9	83.7	79.2	75.2	71.8	68.7	65.9	63.4	61.1	59.1	57.2	55.5	53.9	52.5	51.1	49.9	48.7	47.6	46.6	45.6	44.7	43.9	2000
2100	214.9	181.9	158.3	140.6	126.9	115.9	106.8	99.3	93.0	87.6	82.8	78.7	75.1	71.8	68.9	66.3	64.0	61.8	59.9	58.1	56.4	54.9	53.5	52.2	51.0	49.8	48.8	47.8	46.8	45.9	2100
2200	224.2	189.8	165.2	146.7	132.4	120.9	111.5	103.7	97.1	91.4	86.5	82.2	78.4	75.0	72.0	69.3	66.8	64.6	62.5	60.6	58.9	57.3	55.9	54.5	53.2	52.0	50.9	49.9	48.9	48.0	2200
2300	233.5	197.7	172.1	152.9	137.9	126.0	116.2	108.0	101.1	95.2	90.1	85.6	81.7	78.2	75.0	72.2	69.6	67.3	65.2	63.2	61.4	59.8	58.2	56.8	55.5	54.3	53.1	52.0	51.0	50.0	2300
2400	242.8	205.6	178.9	159.0	143.4	131.0	120.9	112.4	105.2	99.1	93.7	89.1	85.0	81.3	78.1	75.1	72.4	70.0	67.8	65.8	63.9	62.2	60.6	59.1	57.8	56.5	55.3	54.1	53.1	52.1	2400
Term. 2/	19.332	16.110	13.809	12.083	10.740	9.666	8.787	8.055	7.435	6.904	6.444	6.041	5.686	5.370	5.087	4.833	4.603	4.394	4.203	4.028	3.866	3.718	3.580	3.452	3.333	3.222	3.118	3.021	2.929	2.843	Term. 2/
L. H. 3/	.093130	.078942	.068807	.061206	.055294	.050565	.046695	.043471	.040742	.038404	.036377	.034603	.033038	.031647	.030403	.029283	.028269	.027348	.026507	.025735	.025026	.024371	.023765	.023202	.022678	.022188	.021731	.021302	.020898	.020519	L. H. 3/

1/ Based on a tare weight of 16.1 tons and a ratio of empty car miles to loaded car miles of 0.760. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.23.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.33.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.55.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.71.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 65 (Concluded).—TERRITORY NO. 10 - MOUNTAIN PACIFIC

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.8	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	10
20	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	20
30	3.4	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	30
40	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	40
50	3.8	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	50
60	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.4	60
70	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	70
80	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	80
90	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	90
100	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	3.0	3.0	100
120	5.2	5.1	5.0	4.8	4.7	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	120
140	5.6	5.5	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	140
160	6.0	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.9	160
180	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	180
200	6.8	6.6	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	200
220	7.2	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	220
240	7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	240
260	8.0	7.8	7.7	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.4	5.3	260
280	8.4	8.2	8.1	7.9	7.8	7.6	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.7	5.6	280
300	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	6.2	6.1	6.0	6.00	5.9	300
320	9.2	9.0	8.9	8.7	8.5	8.4	8.2	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.4	6.3	6.3	6.2	320
340	9.6	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.6	6.5	340
360	10.0	9.8	9.6	9.5	9.3	9.1	9.0	8.8	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.8	360
380	10.4	10.2	10.0	9.8	9.7	9.5	9.3	9.2	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.1	380
400	10.8	10.6	10.4	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.2	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.4	400
420	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.8	7.7	7.7	420
440	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.3	8.2	8.1	8.0	8.0	440
460	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.2	10.0	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.6	8.5	8.4	8.3	8.2	460
480	12.4	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.7	10.5	10.4	10.2	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	8.8	8.7	8.6	8.5	480
500	12.8	12.6	12.4	12.1	11.9	11.7	11.5	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.2	9.1	9.0	8.9	8.8	500
600	14.9	14.6	14.3	14.1	13.8	13.6	13.4	13.2	13.0	12.8	12.6	12.5	12.3	12.1	12.0	11.8	11.7	11.6	11.4	11.3	11.2	11.1	11.0	10.9	10.8	10.7	10.6	10.5	10.4	10.3	600
700	16.9	16.6	16.3	16.0	15.7	15.5	15.2	15.0	14.8	14.6	14.4	14.2	14.0	13.8	13.7	13.5	13.3	13.2	13.0	12.9	12.8	12.6	12.5	12.4	12.3	12.2	12.1	12.0	11.9	11.8	700
800	18.9	18.5	18.2	17.9	17.6	17.3	17.1	16.8	16.6	16.3	16.1	15.9	15.7	15.5	15.3	15.1	15.0	14.8	14.6	14.5	14.3	14.2	14.1	13.9	13.8	13.7	13.6	13.5	13.3	13.2	800
900	20.9	20.5	20.2	19.8	19.5	19.2	18.9	18.6	18.4	18.1	17.9	17.6	17.4	17.2	17.0	16.8	16.6	16.4	16.3	16.1	15.9	15.8	15.6	15.5	15.3	15.2	15.1	14.9	14.8	14.7	900
1000	22.9	22.5	22.1	21.7	21.4	21.1	20.7	20.4	20.1	19.9	19.6	19.4	19.1	18.9	18.7	18.4	18.2	18.0	17.9	17.7	17.5	17.3	17.2	17.0	16.9	16.7	16.6	16.4	16.3	16.2	1000
1100	24.9	24.5	24.1	23.7	23.3	22.9	22.6	22.2	21.9	21.6	21.4	21.1	20.8	20.6	20.3	20.1	19.9	19.7	19.5	19.3	19.1	18.9	18.7	18.5	18.4	18.2	18.1	17.9	17.8	17.6	1100
1200	27.0	26.5	26.0	25.6	25.2	24.8	24.4	24.1	23.7	23.4	23.1	22.8	22.5	22.3	22.0	21.7	21.5	21.3	21.1	20.8	20.6	20.4	20.3	20.1	19.9	19.7	19.6	19.4	19.2	19.1	1200
1300	29.0	28.5	28.0	27.5	27.1	26.7	26.3	25.9	25.5	25.2	24.8	24.5	24.2	23.9	23.7	23.4	23.1	22.9	22.7	22.4	22.2	22.0	21.8	21.6	21.4	21.2	21.1	20.9	20.7	20.6	1300
1400	31.0	30.4	29.9	29.4	29.0	28.5	28.1	27.7	27.3	26.9	26.6	26.3	25.9	25.6	25.3	25.1	24.8	24.5	24.3	24.0	23.8	23.6	23.4	23.1	22.9	22.7	22.6	22.4	22.2	22.0	1400
1500	33.0	32.4	31.9	31.3	30.8	30.4	29.9	29.5	29.1	28.7	28.3	28.0	27.6	27.3	27.0	26.7	26.4	26.1	25.9	25.6	25.4	25.1	24.9	24.7	24.5	24.3	24.1	23.9	23.7	23.5	1500
1600	35.0	34.4	33.8	33.3	32.7	32.2	31.8	31.3	30.9	30.5	30.1	29.7	29.3	29.0	28.7	28.4	28.0	27.8	27.5	27.2	26.9	26.7	26.4	26.2	26.0	25.8	25.5	25.3	25.1	25.0	1600
1700	37.0	36.4	35.8	35.2	34.6	34.1	33.6	33.1	32.7	32.2	31.8	31.4	31.1	30.7	30.3	30.0	29.7	29.4	29.1	28.8	28.5	28.2	28.0	27.7	27.5	27.3	27.0	26.8	26.6	26.4	1700
1800	39.1	38.4	37.7	37.1	36.5	36.0	35.4	34.9	34.5	34.0	33.6	33.2	32.8	32.4	32.0	31.7	31.3	31.0	30.7	30.4	30.1	29.8	29.5	29.3	29.0	28.8	28.5	28.3	28.1	27.9	1800
1900	41.1	40.4	39.7	39.0	38.4	37.8	37.3	36.8	36.3	35.8	35.3	34.9	34.5	34.1	33.7	33.3	33.0	32.6	32.3	32.0	31.7	31.4	31.1	30.8	30.5	30.3	30.0	29.8	29.6	29.3	1900
2000	43.1	42.3	41.6	40.9	40.3	39.7	39.1	38.6	38.0	37.5	37.1	36.6	36.2	35.8	35.3	35.0	34.6	34.2	33.9	33.6	33.2	32.9	32.6	32.3	32.1	31.8	31.5	31.3	31.0	30.8	2000
2100	45.1	44.3	43.6	42.9	42.2	41.6	41.0	40.4	39.8	39.3	38.8	38.3	37.9	37.4	37.0	36.6	36.2	35.8	35.5	35.1	34.8	34.5	34.2	33.9	33.6	33.3	33.0	32.8	32.50	32.3	2100
2200	47.1	46.3	45.5	44.8	44.1	43.4	42.8	42.2	41.6	41.1	40.6	40.1	39.6	39.1	38.7	38.3	37.9	37.5	37.1	36.7	36.4	36.0	35.7	35.4	35.1	34.8	34.5	34.3	34.0	33.7	2200
2300	49.1	48.3	47.5	46.7	46.0	45.3	44.6	44.0	43.4	42.8	42.3	41.8	41.3	40.8	40.3	39.9	39.5	39.1	38.7	38.3	38.0	37.6	37.3	36.9	36.6	36.3	36.0	35.7	35.5	35.2	2300
2400	51.1	50.3	49.4	48.6	47.9	47.2	46.5	45.8	45.2	44.6	44.0	43.5	43.0	42.5	42.0	41.6	41.1	40.7	40.3	39.9	39.5	39.2	38.8	38.5	38.2	37.8	37.5	37.2	36.9	36.7	2400
Term. 2/	2.762	2.685	2.612	2.544	2.478	2.417	2.358	2.301	2.248	2.197	2.148	2.101	2.057	2.014	1.973	1.933	1.895	1.859	1.824	1.790	1.757	1.726	1.696	1.667	1.638	1.611	1.585	1.559	1.534	1.510	Term. 2/
L. H. 3/	.020161	.019824	.019504	.019201	.018914	.018641	.018382	.018135	.017899	.017674	.017459	.017253	.017056	.016868	.016687	.016513	.016346	.016186	.016031	.015882	.015739	.015601	.015468	.015339	.015214	.015094	.014978	.014865	.014756	.014651	L. H. 3/

1/ Based on a tare weight of 16.1 tons and a ratio of empty car miles to loaded car miles of 0.760. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.23.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.33.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.55.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.71.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 10 - Mountain Pacific

GONDOLA AND HOPPER CARS

TABLE 66.—TERRITORY NO. 10 - MOUNTAIN PACIFIC

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																														Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.5	17.1	14.7	12.8	11.4	10.3	9.4	8.6	7.9	7.4	6.9	6.5	6.1	5.7	5.4	5.2	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	10
20	21.6	18.1	15.5	13.6	12.1	10.9	9.9	9.1	8.4	7.8	7.3	6.9	6.5	6.1	5.8	5.5	5.3	5.0	4.8	4.6	4.5	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	3.3	20
30	22.8	19.0	16.3	14.3	12.8	11.5	10.5	9.6	8.9	8.3	7.8	7.3	6.9	6.5	6.2	5.9	5.6	5.4	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	30
40	23.9	20.0	17.2	15.1	13.4	12.1	11.1	10.2	9.4	8.8	8.2	7.7	7.3	6.9	6.5	6.2	5.9	5.7	5.5	5.2	5.0	4.9	4.7	4.5	4.4	4.3	4.1	4.0	3.9	3.8	40
50	25.1	21.0	18.0	15.8	14.1	12.7	11.6	10.7	9.9	9.2	8.6	8.1	7.7	7.3	6.9	6.6	6.3	6.0	5.8	5.5	5.3	5.1	5.0	4.8	4.7	4.5	4.4	4.3	4.1	4.0	50
60	26.2	21.9	18.9	16.6	14.8	13.4	12.2	11.2	10.4	9.7	9.1	8.5	8.1	7.6	7.2	6.9	6.6	6.3	6.1	5.8	5.6	5.4	5.3	5.1	4.9	4.8	4.6	4.5	4.4	4.3	60
70	27.4	22.9	19.7	17.3	15.5	14.0	12.8	11.7	10.9	10.1	9.5	8.9	8.5	8.0	7.6	7.3	6.9	6.7	6.4	6.2	5.9	5.7	5.5	5.4	5.2	5.0	4.9	4.8	4.6	4.5	70
80	28.5	23.9	20.6	18.1	16.1	14.6	13.3	12.3	11.4	10.6	9.9	9.4	8.8	8.4	8.0	7.6	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.5	5.3	5.1	5.0	4.9	4.7	80
90	29.7	24.9	21.4	18.8	16.8	15.2	13.9	12.8	11.9	11.1	10.4	9.8	9.2	8.8	8.3	8.0	7.6	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	5.0	90
100	30.8	25.8	22.3	19.6	17.5	15.8	14.5	13.3	12.4	11.5	10.8	10.2	9.6	9.1	8.7	8.3	8.0	7.6	7.3	7.1	6.8	6.6	6.4	6.2	6.0	5.8	5.6	5.5	5.4	5.2	100
120	33.1	27.8	24.0	21.1	18.8	17.1	15.6	14.4	13.3	12.5	11.7	11.0	10.4	9.9	9.4	9.0	8.6	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.2	6.0	5.8	5.7	120
140	35.5	29.7	25.6	22.6	20.2	18.3	16.7	15.4	14.3	13.4	12.6	11.8	11.2	10.7	10.2	9.7	9.3	8.9	8.6	8.3	8.0	7.7	7.5	7.3	7.0	6.8	6.7	6.5	6.3	6.2	140
160	37.8	31.7	27.3	24.1	21.5	19.5	17.9	16.5	15.3	14.3	13.4	12.7	12.0	11.4	10.9	10.4	10.0	9.6	9.2	8.9	8.6	8.3	8.0	7.8	7.6	7.4	7.2	7.0	6.8	6.6	160
180	40.1	33.6	29.0	25.6	22.9	20.7	19.0	17.5	16.3	15.2	14.3	13.5	12.8	12.2	11.6	11.1	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.3	8.1	7.9	7.7	7.5	7.3	7.1	180
200	42.4	35.6	30.7	27.1	24.2	22.0	20.1	18.6	17.3	16.2	15.2	14.3	13.6	12.9	12.3	11.8	11.3	10.9	10.5	10.1	9.8	9.4	9.1	8.9	8.6	8.4	8.2	8.0	7.8	7.6	200
220	44.7	37.5	32.4	28.6	25.6	23.2	21.3	19.6	18.3	17.1	16.1	15.2	14.4	13.7	13.0	12.5	12.0	11.5	11.1	10.7	10.3	10.0	9.7	9.4	9.2	8.9	8.7	8.5	8.3	8.1	220
240	47.0	39.5	34.1	30.1	26.9	24.4	22.4	20.7	19.2	18.0	16.9	16.0	15.2	14.4	13.8	13.2	12.6	12.2	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.4	9.2	9.0	8.7	8.5	240
260	49.3	41.4	35.8	31.6	28.3	25.7	23.5	21.7	20.2	18.9	17.8	16.8	16.0	15.2	14.5	13.9	13.3	12.8	12.3	11.9	11.5	11.2	10.8	10.5	10.2	9.9	9.7	9.5	9.2	9.0	260
280	51.6	43.3	37.5	33.1	29.6	26.9	24.7	22.8	21.2	19.9	18.7	17.7	16.7	15.9	15.2	14.6	14.0	13.5	13.0	12.5	12.1	11.7	11.4	11.0	10.7	10.5	10.2	9.9	9.7	9.5	280
300	53.9	45.3	39.2	34.6	31.0	28.1	25.8	23.8	22.2	20.8	19.6	18.5	17.5	16.7	15.9	15.3	14.7	14.1	13.6	13.1	12.7	12.3	11.9	11.6	11.3	11.0	10.7	10.4	10.2	10.0	300
320	56.2	47.2	40.9	36.1	32.3	29.4	26.9	24.9	23.2	21.7	20.4	19.3	18.3	17.5	16.7	16.0	15.3	14.7	14.2	13.7	13.3	12.9	12.5	12.1	11.8	11.5	11.2	10.9	10.7	10.4	320
340	58.5	49.2	42.5	37.6	33.7	30.6	28.1	26.0	24.2	22.6	21.3	20.1	19.1	18.2	17.4	16.7	16.0	15.4	14.8	14.3	13.9	13.4	13.0	12.7	12.3	12.0	11.7	11.4	11.2	10.9	340
360	60.8	51.1	44.2	39.1	35.0	31.8	29.2	27.0	25.1	23.6	22.2	21.0	19.9	19.0	18.1	17.4	16.7	16.0	15.5	14.9	14.5	14.0	13.6	13.2	12.9	12.5	12.2	11.9	11.7	11.4	360
380	63.1	53.1	45.9	40.6	36.4	33.1	30.3	28.1	26.1	24.5	23.1	21.8	20.7	19.7	18.8	18.1	17.3	16.7	16.1	15.5	15.0	14.6	14.2	13.8	13.4	13.0	12.7	12.4	12.1	11.9	380
400	65.4	55.0	47.6	42.1	37.7	34.3	31.5	29.1	27.1	25.4	23.9	22.6	21.5	20.5	19.6	18.7	18.0	17.3	16.7	16.2	15.6	15.2	14.7	14.3	13.9	13.6	13.2	12.9	12.6	12.3	400
420	67.7	57.0	49.3	43.6	39.1	35.5	32.6	30.2	28.1	26.3	24.8	23.5	22.3	21.2	20.3	19.4	18.7	18.0	17.3	16.8	16.2	15.7	15.3	14.8	14.5	14.1	13.7	13.4	13.1	12.8	420
440	70.0	58.9	51.0	45.1	40.4	36.8	33.7	31.2	29.1	27.3	25.7	24.3	23.1	22.0	21.0	20.1	19.3	18.6	18.0	17.4	16.8	16.3	15.8	15.4	15.0	14.6	14.2	13.9	13.6	13.3	440
460	72.3	60.9	52.7	46.6	41.8	38.0	34.9	32.3	30.1	28.2	26.6	25.1	23.9	22.7	21.7	20.8	20.0	19.3	18.6	18.0	17.4	16.9	16.4	15.9	15.5	15.1	14.7	14.4	14.1	13.8	460
480	74.6	62.8	54.4	48.1	43.2	39.2	36.0	33.3	31.1	29.1	27.4	26.0	24.7	23.5	22.5	21.5	20.7	19.9	19.2	18.6	18.0	17.4	16.9	16.5	16.0	15.6	15.3	14.9	14.6	14.2	480
500	76.9	64.8	56.1	49.6	44.5	40.5	37.1	34.4	32.0	30.0	28.3	26.8	25.4	24.3	23.2	22.2	21.4	20.6	19.8	19.2	18.6	18.0	17.5	17.0	16.6	16.2	15.8	15.4	15.0	14.7	500
600	88.4	74.5	64.5	57.1	51.3	46.6	42.8	39.6	37.0	34.7	32.7	30.9	29.4	28.0	26.8	25.7	24.7	23.8	23.0	22.2	21.5	20.9	20.3	19.7	19.2	18.7	18.3	17.9	17.5	17.1	600
700	99.9	84.2	73.0	64.6	58.0	52.8	48.5	44.9	41.9	39.3	37.0	35.1	33.3	31.8	30.4	29.2	28.1	27.0	26.1	25.3	24.5	23.7	23.1	22.4	21.9	21.3	20.8	20.3	19.9	19.5	700
800	111.4	93.9	81.4	72.1	64.8	58.9	54.1	50.2	46.8	43.9	41.4	39.2	37.3	35.6	34.0	32.7	31.4	30.3	29.2	28.3	27.4	26.6	25.9	25.2	24.5	23.9	23.3	22.8	22.3	21.8	800
900	123.0	103.7	89.9	79.5	71.5	65.1	59.8	55.4	51.7	48.5	45.8	43.4	41.2	39.4	37.7	36.1	34.8	33.5	32.4	31.3	30.4	29.5	28.6	27.9	27.2	26.5	25.9	25.3	24.7	24.2	900
1000	134.5	113.4	98.3	87.0	78.3	71.2	65.5	60.7	56.6	53.2	50.2	47.5	45.2	43.1	41.3	39.6	38.1	36.7	35.5	34.3	33.3	32.3	31.4	30.6	29.8	29.1	28.4	27.8	27.2	26.6	1000
1100	146.0	123.1	106.8	94.5	85.0	77.4	71.2	66.0	61.6	57.8	54.5	51.7	49.1	46.9	44.9	43.1	41.5	40.0	38.6	37.4	36.2	35.2	34.2	33.3	32.5	31.7	30.9	30.2	29.6	29.0	1100
1200	157.5	132.8	115.2	102.0	91.8	83.6	76.8	71.2	66.5	62.4	58.9	55.8	53.1	50.7	48.5	46.6	44.8	43.2	41.8	40.4	39.2	38.0	37.0	36.0	35.1	34.3	33.5	32.7	32.0	31.4	1200
1300	169.0	142.6	123.7	109.5	98.5	89.7	82.5	76.5	71.4	67.0	63.3	60.0	57.1	54.5	52.1	50.1	48.2	46.4	44.9	43.4	42.1	40.9	39.8	38.7	37.7	36.8	36.0	35.2	34.4	33.7	1300
1400	180.5	152.3	132.1	117.0	105.3	95.9	88.2	81.8	76.3	71.7	67.6	64.1	61.0	58.2	55.6	53.5	51.5	49.7	48.0	46.5	45.1	43.8	42.6	41.4	40.4	39.4	38.5	37.7	36.9	36.1	1400
1500	192.0	162.0	140.6	124.5	112.0	102.0	93.8	87.0	81.2	76.3	72.0	68.3	65.0	62.0	59.4	57.0	54.9	52.9	51.1	49.5	48.0	46.6	45.3	44.2	43.0	42.0	41.0	40.1	39.3	38.5	1500
1600	203.6	171.8	149.1	132.0	118.8	108.2	99.5	92.3	86.2	80.9	76.4	72.4	68.9	65.8	63.0	60.5	58.2	56.2	54.3	52.5	51.0	49.5	48.1	46.9	45.7	44.6	43.6	42.6	41.7	40.9	1600
1700	215.1	181.5	157.5	139.5	125.5	114.3	105.2	97.5	91.1	85.6	80.8	76.6	72.9	69.6	66.6	64.0	61.6	59.4	57.4	55.6	53.9	52.3	50.9	49.6	48.3	47.2	46.1	45.1	44.1	43.2	1700
1800	226.6	191.2	166.0	147.0	132.3	120.5	110.8	102.8	96.0	90.2	85.1	80.7	76.8	73.3	70.2	67.4	64.9	62.6	60.5	58.6	56.8	55.2	53.7	52.3	51.0	49.8	48.6	47.6	46.5	45.6	1800
1900	238.1	200.9	174.4	154.5	139.0	126.6	116.5	108.1	100.9	94.8	89.5	84.9	80.8	77.1	73.9	70.9	68.3	65.9	63.7	61.6	59.8	58.1	56.5	55.0	53.6	52.4	51.2	50.0	49.0	48.0	1900
2000	249.6	210.7	182.9	162.0	145.8	132.8	122.2	113.3	105.9	99.4	93.9	89.0	84.7	80.9	77.5	74.4	71.6	69.1	66.8	64.7	62.7	60.9	59.3	57.7	56.3	54.9	53.7	52.5	51.4	50.4	2000
2100	261.1	220.4	191.3	169.5	152.5	139.0	127.9	118.6	110.8	104.1	98.2	93.2	88.7	84.7	81.1	77.9	75.0	72.3	69.9	67.7	65.7	63.8	62.0	60.4	58.9	57.5	56.2	55.0	53.8	52.7	2100
2200	272.6	230.1	199.6	177.0	159.3	145.1	133.5	123.9	115.7	108.7	102.6	97.3	92.6	88.4	84.7	81.4	78.3	75.6	73.0	70.7	68.6	66.6	64.8	63.1	61.6	60.1	58.7	57.5	56.2	55.1	2200
2300	284.2	239.9	208.2	184.5	166.0	151.3	139.2	129.1	120.6	113.3	107.0	101.4	96.6	92.2	88.3	84.8	81.7	78.8	76.2	73.8	71.6	69.5	67.6	65.9	64.2	62.7	61.3	59.9	58.7	57.5	2300
2400	295.7	249.6	216.7	192.0	172.8	157.4	144.9	134.4	125.5	117.9	111.4	105.6	100.5	96.0	92.0	88.3	85.0	82.0	79.3	76.8	74.5	72.4	70.4	68.6	66.9	65.3	63.8	62.4	61.1	59.9	2400
Term. 2/	19.332	16.110	13.809	12.083	10.740	9.666	8.787	8.055	7.435	6.904	6.444	6.041	5.686	5.370	5.087	4.833	4.603	4.394	4.203	4.028	3.866	3.718	3.580	3.452	3.333	3.222	3.118	3.021	2.929	2.843	Term. 2/
L. H. 3/	.115140	.097283	.084529	.074963	.067522	.061570	.056700	.052642	.049208	.046264	.043713	.041481	.039512	.037761	.036135	.034785	.033510	.032350	.031291	.030321	.029428	.028604	.027841	.027132	.026472	.025857	.025281	.024741	.024233	.023756	L. H. 3/

1/ Based on a tare weight of 23.3 tons and a ratio of empty car miles to loaded car miles of 0.789. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.23.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.33.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.55.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.71.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 66 (Concluded).--TERRITORY NO. 10 - MOUNTAIN PACIFIC

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	10
20	3.2	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	2.0	20
30	3.5	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.9	30
40	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	40
50	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	50
60	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	60
70	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	70
80	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.9	2.8	80
90	4.9	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	90
100	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1	100
120	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.2	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	120
140	6.0	5.9	5.8	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	140
160	6.3	6.3	6.2	6.1	6.0	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	160
180	7.0	6.8	6.7	6.5	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	180
200	7.4	7.3	7.1	7.0	6.8	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	200
220	7.9	7.7	7.6	7.4	7.3	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	220
240	8.4	8.2	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.6	5.5	5.4	240
260	8.8	8.6	8.5	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.8	260
280	9.3	9.1	8.9	8.7	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.4	6.3	6.2	6.2	6.1	280
300	9.8	9.5	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.7	7.5	7.4	7.3	7.3	7.2	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.6	6.5	6.4	300
320	10.2	10.0	9.8	9.6	9.4	9.3	9.1	8.9	8.8	8.7	8.5	8.4	8.3	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	320
340	10.7	10.5	10.3	10.1	9.9	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.1	340
360	11.2	10.9	10.7	10.5	10.3	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.4	360
380	11.6	11.4	11.2	10.9	10.7	10.5	10.4	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.9	7.8	7.7	380
400	12.1	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	400
420	12.6	12.3	12.1	11.8	11.6	11.4	11.2	11.0	10.8	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.5	8.4	420
440	13.0	12.8	12.5	12.3	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.7	10.6	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	440
460	13.5	13.2	13.0	12.7	12.5	12.3	12.0	11.8	11.7	11.5	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	460
480	13.9	13.7	13.4	13.2	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.6	9.5	9.5	9.4	480
500	14.4	14.1	13.9	13.6	13.3	13.1	12.9	12.7	12.5	12.3	12.1	11.9	11.8	11.6	11.4	11.3	11.1	11.0	10.9	10.8	10.6	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	500
600	16.7	16.4	16.1	15.8	15.5	15.3	15.0	14.8	14.5	14.3	14.1	13.9	13.7	13.5	13.3	13.2	13.0	12.8	12.7	12.5	12.4	12.3	12.1	12.0	11.9	11.8	11.7	11.5	11.4	11.3	600
700	19.1	18.7	18.3	18.0	17.7	17.4	17.1	16.8	16.6	16.3	16.1	15.9	15.6	15.4	15.2	15.0	14.8	14.7	14.5	14.3	14.2	14.0	13.9	13.7	13.6	13.5	13.3	13.2	13.1	13.0	700
800	21.4	21.0	20.6	20.2	19.9	19.5	19.2	18.9	18.6	18.3	18.1	17.8	17.6	17.3	17.1	16.9	16.7	16.5	16.3	16.1	15.9	15.8	15.6	15.5	15.3	15.2	15.0	14.9	14.7	14.6	800
900	23.7	23.3	22.8	22.4	22.0	21.7	21.3	21.0	20.7	20.4	20.1	19.8	19.5	19.3	19.0	18.8	18.5	18.3	18.1	17.9	17.7	17.5	17.4	17.2	17.0	16.8	16.7	16.5	16.4	16.2	900
1000	26.1	25.6	25.1	24.6	24.2	23.8	23.4	23.1	22.7	22.4	22.1	21.7	21.5	21.2	20.9	20.6	20.4	20.2	19.9	19.7	19.5	19.3	19.1	18.9	18.7	18.5	18.4	18.2	18.0	17.9	1000
1100	28.4	27.9	27.3	26.9	26.4	25.9	25.5	25.1	24.8	24.4	24.0	23.7	23.4	23.1	22.8	22.5	22.2	22.0	21.7	21.5	21.3	21.0	20.8	20.6	20.4	20.2	20.0	19.9	19.7	19.5	1100
1200	30.7	30.1	29.6	29.1	28.6	28.1	27.6	27.2	26.8	26.4	26.0	25.7	25.3	25.0	24.7	24.4	24.1	23.8	23.6	23.3	23.0	22.8	22.6	22.4	22.1	21.9	21.7	21.5	21.3	21.2	1200
1300	33.1	32.4	31.8	31.3	30.7	30.2	29.7	29.3	28.8	28.4	28.0	27.6	27.3	26.9	26.6	26.3	26.0	25.7	25.4	25.1	24.8	24.6	24.3	24.1	23.8	23.6	23.4	23.2	23.0	22.8	1300
1400	35.4	34.7	34.1	33.5	32.9	32.4	31.9	31.4	30.9	30.4	30.0	29.6	29.2	28.8	28.5	28.1	27.8	27.5	27.2	26.9	26.6	26.3	26.1	25.8	25.6	25.3	25.1	24.9	24.6	24.4	1400
1500	37.7	37.0	36.3	35.7	35.1	34.5	34.0	33.4	32.9	32.5	32.0	31.6	31.2	30.8	30.4	30.0	29.7	29.3	29.0	28.7	28.4	28.1	27.8	27.5	27.3	27.0	26.8	26.5	26.3	26.1	1500
1600	40.1	39.3	38.6	37.9	37.3	36.6	36.1	35.5	35.0	34.5	34.0	33.5	33.1	32.7	32.3	31.9	31.5	31.1	30.8	30.5	30.1	29.8	29.5	29.2	29.0	28.7	28.4	28.2	27.9	27.7	1600
1700	42.4	41.6	40.8	40.1	39.4	38.8	38.2	37.6	37.0	36.5	36.0	35.5	35.0	34.6	34.2	33.7	33.4	33.0	32.6	32.3	31.9	31.6	31.3	31.0	30.7	30.4	30.1	29.8	29.6	29.3	1700
1800	44.7	43.9	43.1	42.3	41.6	40.9	40.3	39.7	39.1	38.5	38.0	37.5	37.0	36.5	36.1	35.6	35.2	34.8	34.4	34.0	33.7	33.3	33.0	32.7	32.4	32.1	31.8	31.5	31.2	31.0	1800
1900	47.0	46.2	45.3	44.5	43.8	43.1	42.4	41.7	41.1	40.5	40.0	39.4	38.9	38.4	37.9	37.5	37.1	36.6	36.2	35.8	35.5	35.1	34.8	34.4	34.1	33.8	33.5	33.2	32.9	32.6	1900
2000	49.4	48.4	47.6	46.7	46.0	45.2	44.5	43.8	43.2	42.5	42.0	41.4	40.9	40.3	39.8	39.4	38.9	38.5	38.0	37.6	37.2	36.9	36.5	36.1	35.8	35.5	35.1	34.8	34.5	34.3	2000
2100	51.7	50.7	49.8	48.9	48.1	47.3	46.6	45.9	45.2	44.6	43.9	43.4	42.8	42.3	41.7	41.2	40.8	40.3	39.9	39.4	39.0	38.6	38.2	37.9	37.5	37.2	36.8	36.5	36.2	35.9	2100
2200	54.0	53.0	52.1	51.2	50.3	49.5	48.7	48.0	47.3	46.6	45.9	45.3	44.7	44.2	43.6	43.1	42.6	42.1	41.7	41.2	40.8	40.4	40.0	39.6	39.2	38.9	38.5	38.2	37.8	37.5	2200
2300	56.4	55.3	54.3	53.4	52.5	51.6	50.8	50.0	49.3	48.6	47.9	47.3	46.7	46.1	45.5	45.0	44.5	44.0	43.5	43.0	42.6	42.1	41.7	41.3	40.9	40.5	40.2	39.8	39.5	39.2	2300
2400	58.7	57.6	56.6	55.6	54.6	53.8	52.9	52.1	51.3	50.6	49.9	49.3	48.6	48.0	47.4	46.8	46.3	45.8	45.3	44.8	44.3	43.9	43.5	43.0	42.6	42.2	41.9	41.5	41.1	40.8	2400
Term. 2/	2.762	2.685	2.612	2.544	2.478	2.417	2.358	2.301	2.248	2.197	2.148	2.101	2.057	2.014	1.973	1.933	1.895	1.859	1.824	1.790	1.757	1.726	1.696	1.667	1.638	1.611	1.585	1.559	1.534	1.510	Term. 2/
L. H. 3/	.023306	.022881	.022478	.022097	.021736	.021393	.021066	.020755	.020458	.020175	.019904	.019646	.019398	.019160	.018933	.018714	.018504	.018302	.018108	.017920	.017740	.017566	.017398	.017236	.017080	.016928	.016782	.016640	.016503	.016370	L. H. 3/

1/ Based on a tare weight of 23.3 tons and a ratio of empty car miles to loaded car miles of 0.789. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.23.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.33.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.55.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.71.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 10 - Mountain Pacific

TANK CARS

TABLE 67.--TERRITORY NO. 10 - MOUNTAIN PACIFIC

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	18.0	15.0	12.9	11.3	10.0	9.0	8.2	7.5	7.0	6.5	6.0	5.7	5.3	5.1	4.8	4.6	4.3	4.1	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	10
20	19.3	16.1	13.9	12.1	10.8	9.7	8.9	8.1	7.5	7.0	6.6	6.2	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.2	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	20
30	20.7	17.3	14.9	13.0	11.6	10.5	9.5	8.8	8.1	7.5	7.1	6.6	6.3	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	30
40	22.1	18.4	15.8	13.9	12.4	11.2	10.2	9.4	8.7	8.1	7.6	7.1	6.7	6.4	6.0	5.8	5.5	5.3	5.0	4.8	4.7	4.5	4.3	4.2	4.1	3.9	3.8	3.7	3.6	3.5	40
50	23.4	19.6	16.8	14.8	13.2	11.9	10.9	10.0	9.3	8.6	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	50
60	24.8	20.7	17.8	15.7	14.0	12.6	11.5	10.6	9.8	9.2	8.6	8.1	7.6	7.2	6.9	6.6	6.3	6.0	5.8	5.5	5.3	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.1	60
70	26.0	21.9	18.8	16.5	14.8	13.3	12.2	11.2	10.4	9.7	9.1	8.6	8.1	7.7	7.3	7.0	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.4	4.3	70
80	27.5	23.0	19.8	17.4	15.6	14.1	12.8	11.8	11.0	10.2	9.6	9.0	8.5	8.1	7.7	7.4	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.8	4.7	4.6	80
90	28.8	24.2	20.8	18.3	16.3	14.8	13.5	12.4	11.5	10.8	10.1	9.5	9.0	8.5	8.1	7.8	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.6	5.4	5.3	5.1	5.0	4.9	90
100	30.2	25.3	21.8	19.2	17.1	15.5	14.2	13.1	12.1	11.3	10.6	10.0	9.4	9.0	8.5	8.2	7.8	7.5	7.2	6.9	6.7	6.5	6.2	6.1	5.9	5.7	5.5	5.4	5.3	5.1	100
120	32.9	27.6	23.8	20.9	18.7	16.9	15.5	14.3	13.3	12.4	11.6	10.9	10.4	9.8	9.4	9.0	8.6	8.2	7.9	7.6	7.4	7.1	6.9	6.7	6.5	6.3	6.1	6.0	5.8	5.7	120
140	35.6	29.9	25.8	22.7	20.3	18.4	16.8	15.5	14.4	13.5	12.6	11.9	11.3	10.7	10.2	9.8	9.3	9.0	8.6	8.3	8.0	7.8	7.5	7.3	7.1	6.9	6.7	6.5	6.4	6.2	140
160	38.4	32.2	27.8	24.5	21.9	19.8	18.1	16.7	15.5	14.5	13.6	12.9	12.2	11.6	11.0	10.6	10.1	9.7	9.3	9.0	8.7	8.4	8.1	7.9	7.7	7.5	7.3	7.1	6.9	6.7	160
180	41.1	34.5	29.8	26.2	23.5	21.3	19.5	18.0	16.7	15.6	14.7	13.8	13.1	12.5	11.9	11.4	10.9	10.4	10.1	9.7	9.4	9.1	8.8	8.5	8.3	8.0	7.8	7.6	7.4	7.3	180
200	43.8	36.8	31.7	28.0	25.0	22.7	20.8	19.2	17.8	16.7	15.7	14.8	14.0	13.3	12.7	12.2	11.6	11.2	10.8	10.4	10.0	9.7	9.4	9.1	8.9	8.6	8.4	8.2	8.0	7.8	200
220	46.5	39.1	33.7	29.7	26.6	24.1	22.1	20.4	19.0	17.7	16.7	15.7	14.9	14.2	13.5	12.9	12.4	11.9	11.5	11.1	10.7	10.4	10.0	9.8	9.5	9.2	9.0	8.8	8.5	8.3	220
240	49.2	41.3	35.7	31.5	28.2	25.6	23.4	21.6	20.1	18.8	17.7	16.7	15.8	15.1	14.4	13.7	13.2	12.7	12.2	11.8	11.4	11.0	10.7	10.4	10.1	9.8	9.6	9.3	9.1	8.9	240
260	52.0	43.6	37.7	33.2	29.8	27.0	24.7	22.9	21.3	19.9	18.7	17.7	16.7	15.9	15.2	14.5	14.0	13.4	12.9	12.5	12.1	11.7	11.3	11.0	10.7	10.4	10.1	9.9	9.6	9.4	260
280	54.7	45.9	39.7	35.0	31.4	28.5	26.1	24.1	22.4	21.0	19.7	18.6	17.7	16.8	16.0	15.3	14.7	14.2	13.6	13.2	12.7	12.3	11.9	11.6	11.3	11.0	10.7	10.4	10.2	10.0	280
300	57.4	48.2	41.7	36.8	32.9	29.9	27.4	25.3	23.5	22.0	20.7	19.6	18.6	17.7	16.9	16.1	15.5	14.9	14.4	13.9	13.4	13.0	12.6	12.2	11.9	11.6	11.3	11.0	10.7	10.5	300
320	60.1	50.5	43.7	38.5	34.5	31.3	28.7	26.5	24.7	23.1	21.7	20.5	19.5	18.5	17.7	16.9	16.3	15.6	15.1	14.5	14.1	13.6	13.2	12.8	12.5	12.2	11.8	11.6	11.3	11.0	320
340	62.8	52.8	45.7	40.3	36.1	32.8	30.0	27.8	25.8	24.2	22.8	21.5	20.4	19.4	18.5	17.7	17.0	16.4	15.8	15.2	14.7	14.3	13.8	13.5	13.1	12.7	12.4	12.1	11.8	11.6	340
360	65.5	55.1	47.6	42.0	37.7	34.2	31.4	29.0	27.0	25.3	23.8	22.5	21.3	20.3	19.4	18.5	17.8	17.1	16.5	15.9	15.4	14.9	14.5	14.1	13.7	13.3	13.0	12.7	12.4	12.1	360
380	68.3	57.4	49.6	43.8	39.3	35.7	32.7	30.2	28.1	26.3	24.8	23.4	22.2	21.2	20.2	19.3	18.6	17.9	17.2	16.6	16.1	15.6	15.1	14.7	14.3	13.9	13.6	13.2	12.9	12.6	380
400	71.0	59.7	51.6	45.6	40.9	37.1	34.0	31.4	29.3	27.4	25.8	24.4	23.1	22.0	21.0	20.1	19.3	18.6	17.9	17.3	16.8	16.2	15.8	15.3	14.9	14.5	14.1	13.8	13.5	13.2	400
420	73.7	62.0	53.6	47.3	42.4	38.5	35.3	32.7	30.4	28.5	26.8	25.3	24.0	22.9	21.9	20.9	20.1	19.3	18.7	18.0	17.4	16.9	16.4	15.9	15.5	15.1	14.7	14.4	14.0	13.7	420
440	76.4	64.3	55.6	49.1	44.0	40.0	36.7	33.9	31.6	29.6	27.8	26.3	25.0	23.8	22.7	21.7	20.9	20.1	19.4	18.7	18.1	17.5	17.0	16.5	16.1	15.7	15.3	14.9	14.6	14.2	440
460	79.1	66.6	57.6	50.8	45.6	41.4	38.0	35.1	32.7	30.6	28.8	27.3	25.9	24.6	23.5	22.5	21.6	20.8	20.1	19.4	18.8	18.2	17.7	17.2	16.7	16.3	15.8	15.5	15.1	14.8	460
480	81.9	68.8	59.6	52.6	47.2	42.8	39.3	36.3	33.8	31.7	29.8	28.2	26.8	25.5	24.4	23.3	22.4	21.6	20.8	20.1	19.4	18.8	18.3	17.8	17.3	16.8	16.4	16.0	15.7	15.3	480
500	84.6	71.1	61.5	54.4	48.8	44.3	40.6	37.6	35.0	32.8	30.9	29.2	27.7	26.4	25.2	24.1	23.2	22.3	21.5	20.8	20.1	19.5	18.9	18.4	17.9	17.4	17.0	16.6	16.2	15.8	500
600	98.2	82.6	71.5	63.1	56.7	51.5	47.2	43.7	40.7	38.1	35.9	34.0	32.3	30.7	29.4	28.1	27.0	26.0	25.1	24.2	23.5	22.8	22.1	21.5	20.9	20.4	19.9	19.4	18.9	18.5	600
700	111.7	94.1	81.4	71.9	64.6	58.7	53.8	49.8	46.4	43.5	41.0	38.8	36.8	35.1	33.5	32.1	30.9	29.7	28.7	27.7	26.8	26.0	25.3	24.6	23.9	23.3	22.7	22.2	21.7	21.2	700
800	125.3	105.9	91.4	80.7	72.5	65.9	60.5	56.0	52.1	48.9	46.0	43.6	41.4	39.4	37.7	36.1	34.7	33.4	32.3	31.2	30.2	29.3	28.4	27.6	26.9	26.2	25.6	25.0	24.4	23.9	800
900	138.9	117.0	101.3	89.5	80.4	73.1	67.1	62.1	57.9	54.2	51.1	48.4	45.9	43.8	41.9	40.1	38.6	37.1	35.8	34.6	33.5	32.5	31.6	30.7	29.9	29.2	28.4	27.8	27.2	26.6	900
1000	152.5	128.4	111.2	98.3	88.3	80.3	73.7	68.2	63.6	59.6	56.2	53.2	50.5	48.1	46.0	44.1	42.4	40.8	39.4	38.1	36.9	35.8	34.8	33.8	32.9	32.1	31.3	30.6	29.9	29.3	1000
1100	166.1	139.9	121.2	107.1	96.2	87.5	80.3	74.3	69.3	65.0	61.2	58.0	55.1	52.5	50.2	48.1	46.3	44.6	43.0	41.6	40.3	39.1	37.9	36.9	35.9	35.0	34.2	33.4	32.6	31.9	1100
1200	179.7	151.3	131.1	115.9	104.1	94.6	86.9	80.5	75.0	70.3	66.3	62.8	59.6	56.8	54.4	52.1	50.1	48.3	46.6	45.0	43.6	42.3	41.1	40.0	38.9	38.0	37.0	36.2	35.4	34.6	1200
1300	193.3	162.8	141.0	124.7	112.0	101.8	93.5	86.6	80.7	75.7	71.4	67.6	64.2	61.2	58.5	56.1	53.9	52.0	50.2	48.5	47.0	45.6	44.3	43.1	41.9	40.9	39.9	39.0	38.1	37.3	1300
1400	206.9	174.3	151.0	133.5	119.9	109.0	100.1	92.7	86.5	81.1	76.4	72.3	68.8	65.6	62.7	60.1	57.6	55.7	53.7	52.0	50.3	48.8	47.4	46.1	44.9	43.8	42.8	41.8	40.8	40.0	1400
1500	220.5	185.7	160.9	142.3	127.8	116.2	106.8	98.9	92.2	86.5	81.5	77.1	73.3	69.9	66.9	64.1	61.6	59.4	57.3	55.4	53.7	52.1	50.6	49.2	47.9	46.7	45.6	44.6	43.6	42.7	1500
1600	234.1	197.2	170.8	151.1	135.7	123.4	113.4	105.0	97.9	91.8	86.6	81.9	77.9	74.3	71.0	68.1	65.5	63.1	60.9	58.9	57.1	55.3	53.8	52.3	50.9	49.7	48.5	47.4	46.3	45.3	1600
1700	247.6	208.6	180.8	159.9	143.6	130.6	120.0	111.1	103.6	97.2	91.6	86.7	82.4	78.6	75.2	72.1	69.3	66.8	64.5	62.5	60.4	58.6	56.9	55.4	54.0	52.6	51.3	50.2	49.1	48.0	1700
1800	261.2	220.1	190.7	168.7	151.5	137.8	126.6	117.2	109.3	102.6	96.7	91.5	87.0	83.0	79.4	76.1	73.2	70.5	68.1	65.8	63.8	61.9	60.1	58.5	57.0	55.5	54.2	53.0	51.8	50.7	1800
1900	274.8	231.6	200.6	177.5	159.4	145.0	133.2	123.4	115.1	107.9	101.7	96.3	91.6	87.3	83.5	80.1	77.0	74.2	71.6	69.3	67.1	65.1	63.3	61.6	60.0	58.5	57.1	55.8	54.5	53.4	1900
2000	288.4	243.0	210.6	186.3	167.3	152.2	139.8	129.5	120.8	113.3	106.8	101.1	96.1	91.7	87.7	84.1	80.9	77.9	75.2	72.8	70.5	68.4	66.4	64.6	63.0	61.4	59.9	58.6	57.3	56.1	2000
2100	302.0	254.5	220.5	195.1	175.2	159.4	146.4	135.6	126.5	118.7	111.9	105.9	100.7	96.0	91.9	88.1	84.7	81.6	78.8	76.2	73.8	71.6	69.6	67.7	66.0	64.3	62.8	61.4	60.0	58.7	2100
2200	315.6	265.9	230.5	203.8	183.2	166.6	153.1	141.8	132.2	124.0	116.9	110.7	105.2	100.4	96.0	92.1	88.6	85.3	82.4	79.7	77.2	74.9	72.8	70.8	69.0	67.3	65.7	64.2	62.8	61.4	2200
2300	329.2	277.4	240.4	212.6	191.1	173.8	159.7	147.9	137.9	129.4	122.0	115.5	109.8	104.7	100.2	96.1	92.4	89.0	86.0	83.1	80.6	78.2	76.0	73.9	72.0	70.2	68.5	67.0	65.5	64.1	2300
2400	342.8	288.8	250.3	221.4	199.0	181.0	166.3	154.0	143.7	134.8	127.1	120.3	114.4	109.1	104.4	100.4	96.2	92.7	89.5	86.6	83.9	81.4	79.1	77.0	75.0	73.1	71.4	69.8	68.2	66.8	2400
Term. 2/	16.618	13.848	11.870	10.386	9.232	8.309	7.554	6.924	6.392	5.935	5.539	5.193	4.888	4.616	4.373	4.155	3.957	3.777	3.613	3.462	3.324	3.196	3.077	2.968	2.865	2.770	2.680	2.597	2.518	2.444	Term. 2/
L. H. 3/	.139900	.114583	.099357	.087938	.079056	.071950	.066136	.061892	.057192	.053679	.050633	.047969	.045618	.043528	.041658	.039975	.038452	.037068	.035804	.034646	.033580	.032596	.031685	.030839	.030052	.029317	.028629	.027984	.027379	.026809	L. H. 3/

1/ Based on a tare weight of 22.6 tons and a ratio of empty car miles to loaded car miles of 1.000. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.23.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.33.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.55.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.71.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 67 (Concluded).—TERRITORY NO. 10 - MOUNTAIN PACIFIC

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	15	16	17	18	19	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
120																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
140																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
160																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
180																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
200																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
220	8.2	8.0	7.8	7.6	7.5	7.4	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
240	8.7	8.5	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.8	6.7	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
260	9.2	9.0	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
280	9.7	9.5	9.3	9.1	9.0	8.8	8.6	8.5	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
300	10.3	10.0	9.8	9.6	9.5	9.3	9.1	8.9	8.8	8.6	8.5	8.4	8.2	8.1	8.0	7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
320	10.8	10.6	10.3	10.1	9.9	9.8	9.6	9.4	9.3	9.1	9.0	8.8	8.7	8.6	8.4	8.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
340	11.3	11.1	10.8	10.6	10.4	10.2	10.1	9.9	9.7	9.5	9.4	9.3	9.1	9.0	8.9	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
360	11.8	11.6	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.5	9.4	9.3	9.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
380	12.4	12.1	11.9	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.1	10.0	9.8	9.7	9.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
400	12.9	12.6	12.4	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.6	10.4	10.3	10.1	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
420	13.4	13.1	12.9	12.6	12.4	12.2	11.9	11.7	11.5	11.4	11.2	11.0	10.8	10.7	10.5	10.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
440	13.9	13.6	13.4	13.1	12.9	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.3	11.1	11.0	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
460	14.5	14.2	13.9	13.6	13.4	13.1	12.9	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.4	11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
480	15.0	14.7	14.4	14.1	13.8	13.6	13.4	13.1	12.9	12.7	12.5	12.3	12.1	12.0	11.8	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
500	15.5	15.2	14.9	14.6	14.3	14.1	13.8	13.6	13.4	13.2	13.0	12.8	12.6	12.4	12.2	12.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
600	18.1	17.8	17.4	17.1	16.8	16.5	16.2	15.9	15.7	15.4	15.2	14.9	14.7	14.5	14.3	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
700	20.8	20.3	19.9	19.6	19.2	18.9	18.5	18.2	17.9	17.7	17.4	17.1	16.9	16.7	16.4	16.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
800	23.4	22.9	22.5	22.1	21.6	21.3	20.9	20.6	20.2	19.9	19.6	19.3	19.1	18.8	18.5	18.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
900	26.0	25.5	25.0	24.5	24.1	23.7	23.3	22.9	22.5	22.2	21.8	21.5	21.2	20.9	20.6	20.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
1000	28.6	28.1	27.5	27.0	26.5	26.1	25.6	25.2	24.8	24.4	24.1	23.7	23.4	23.1	22.7	22.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
1100	31.3	30.6	30.1	29.5	29.0	28.5	28.0	27.5	27.1	26.7	26.3	25.9	25.5	25.2	24.9	24.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
1200	33.9	33.2	32.6	32.0	31.4	30.9	30.3	29.8	29.4	28.9	28.5	28.1	27.7	27.3	27.0	26.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1300	36.5	35.8	35.1	34.5	33.8	33.3	32.7	32.2	31.7	31.2	30.7	30.3	29.9	29.5	29.1	28.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
1400	39.2	38.4	37.6	36.9	36.3	35.7	35.1	34.5	34.0	33.4	32.9	32.5	32.0	31.6	31.2	30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1500	41.8	41.0	40.2	39.4	38.7	38.1	37.4	36.8	36.2	35.7	35.2	34.7	34.2	33.7	33.3	32.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
1600	44.4	43.5	42.7	41.9	41.2	40.5	39.8	39.1	38.5	37.9	37.4	36.8	36.3	35.8	35.4	34.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600
1700	47.0	46.1	45.2	44.4	43.6	42.9	42.1	41.5	40.8	40.2	39.6	39.0	38.5	38.0	37.5	37.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1700
1800	49.7	48.7	47.8	46.9	46.0	45.3	44.5	43.8	43.1	42.4	41.8	41.2	40.7	40.1	39.6	39.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800
1900	52.3	51.3	50.3	49.4	48.5	47.7	46.9	46.1	45.4	44.7	44.0	43.4	42.8	42.2	41.7	41.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1900
2000	54.9	53.8	52.8	51.8	50.9	50.1	49.2	48.4	47.7	47.0	46.3	45.6	45.0	44.4	43.8	43.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000
2100	57.5	56.4	55.3	54.3	53.4	52.5	51.6	50.8	50.0	49.2	48.5	47.8	47.1	46.5	45.9	45.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2100
2200	60.2	59.0	57.9	56.8	55.8	54.9	53.9	53.1	52.3	51.5	50.7	50.0	49.3	48.6	48.0	47.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2200
2300	62.8	61.6	60.4	59.3	58.2	57.2	56.3	55.4	54.5	53.7	52.9	52.2	51.5	50.8	50.1	49.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2300
2400	65.4	64.1	62.9	61.8	60.7	59.6	58.7	57.7	56.8	56.0	55.2	54.4	53.6	52.9	52.2	51.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2400
Term. 2/	2.374	2.308	2.246	2.187	2.131	2.077	2.027	1.978	1.932	1.888	1.846	1.806	1.768	1.731	1.696	1.662	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.026271	.025764	.025284	.024829	.024397	.023988	.023598	.023226	.022872	.022534	.022211	.021902	.021606	.021323	.021051	.020790	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 1.000. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.23.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.33.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value including the less-carload and passenger portion, multiply by 1.55.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.71.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 10 - Mountain Pacific

STOCK CARS

TABLE 68.—TERRITORY NO. 10 - MOUNTAIN PACIFIC

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.4	17.0	14.6	12.8	11.4	10.3	9.3	8.6	7.9	7.3	6.9	6.4	6.1	5.7	5.4	5.2	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.5	-	-	-	-	10
20	21.5	18.0	15.4	13.5	12.0	10.8	9.9	9.1	8.4	7.8	7.3	6.8	6.4	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.8	3.7	-	-	-	-	20
30	22.6	18.9	16.2	14.2	12.7	11.4	10.4	9.6	8.8	8.2	7.7	7.2	6.8	6.5	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	-	-	-	-	30
40	23.7	19.8	17.0	14.9	13.3	12.0	11.0	10.1	9.3	8.7	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.2	-	-	-	-	40
50	24.8	20.7	17.8	15.7	14.0	12.6	11.5	10.6	9.8	9.1	8.5	8.0	7.6	7.2	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	-	-	-	-	50
60	25.9	21.7	18.6	16.4	14.6	13.2	12.0	11.1	10.3	9.6	9.0	8.4	8.0	7.5	7.2	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	-	-	-	-	60
70	27.0	22.6	19.4	17.1	15.2	13.8	12.6	11.6	10.7	10.0	9.4	8.8	8.3	7.9	7.5	7.2	6.9	6.6	6.3	6.1	5.8	5.6	5.5	5.3	5.1	5.0	-	-	-	-	70
80	28.1	23.5	20.2	17.8	15.9	14.4	13.1	12.1	11.2	10.4	9.8	9.2	8.7	8.3	7.9	7.5	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.4	5.2	-	-	-	-	80
90	29.2	24.4	21.0	18.5	16.5	14.9	13.7	12.6	11.7	10.9	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.5	-	-	-	-	90
100	30.3	25.4	21.9	19.2	17.2	15.5	14.2	13.1	12.1	11.3	10.6	10.0	9.5	9.0	8.6	8.2	7.8	7.5	7.2	6.9	6.7	6.5	6.3	6.1	5.9	5.7	-	-	-	-	100
120	32.5	27.2	23.5	20.6	18.5	16.7	15.3	14.1	13.1	12.2	11.5	10.8	10.2	9.7	9.2	8.8	8.5	8.1	7.8	7.5	7.3	7.0	6.8	6.6	6.4	6.2	-	-	-	-	120
140	34.6	29.1	25.1	22.1	19.7	17.9	16.4	15.1	14.0	13.1	12.3	11.6	11.0	10.4	9.9	9.5	9.1	8.7	8.4	8.1	7.8	7.6	7.3	7.1	6.9	6.7	-	-	-	-	140
160	36.8	30.9	26.7	23.5	21.0	19.1	17.4	16.1	15.0	14.0	13.1	12.4	11.7	11.2	10.6	10.2	9.7	9.4	9.0	8.7	8.4	8.1	7.9	7.6	7.4	7.2	-	-	-	-	160
180	39.0	32.8	28.3	24.9	22.3	20.2	18.5	17.1	15.9	14.9	14.0	13.2	12.5	11.9	11.3	10.8	10.4	10.0	9.6	9.3	9.0	8.7	8.4	8.2	7.9	7.7	-	-	-	-	180
200	41.2	34.6	29.9	26.4	23.6	21.4	19.6	18.1	16.8	15.7	14.8	14.0	13.3	12.6	12.0	11.5	11.0	10.6	10.2	9.9	9.5	9.2	8.9	8.7	8.4	8.2	-	-	-	-	200
220	43.4	36.5	31.5	27.8	24.9	22.6	20.7	19.1	17.8	16.6	15.6	14.8	14.0	13.3	12.7	12.2	11.7	11.2	10.8	10.4	10.1	9.8	9.5	9.2	8.9	8.7	-	-	-	-	220
240	45.6	38.3	33.1	29.2	26.2	23.8	21.8	20.1	18.7	17.5	16.5	15.6	14.8	14.1	13.4	12.8	12.3	11.8	11.4	11.0	10.7	10.3	10.0	9.7	9.4	9.2	-	-	-	-	240
260	47.8	40.2	34.7	30.6	27.5	24.9	22.9	21.1	19.7	18.4	17.3	16.4	15.5	14.8	14.1	13.5	13.0	12.5	12.0	11.6	11.2	10.9	10.5	10.2	10.0	9.7	-	-	-	-	260
280	50.0	42.0	36.3	32.1	28.8	26.1	23.9	22.1	20.6	19.3	18.1	17.2	16.3	15.5	14.8	14.2	13.6	13.1	12.6	12.2	11.8	11.4	11.1	10.8	10.5	10.2	-	-	-	-	280
300	52.2	43.9	37.9	33.5	30.1	27.3	25.0	23.1	21.5	20.2	19.0	17.9	17.0	16.2	15.5	14.8	14.2	13.7	13.2	12.8	12.4	12.0	11.6	11.3	11.0	10.7	-	-	-	-	300
320	54.3	45.7	39.5	34.9	31.3	28.5	26.1	24.1	22.5	21.1	19.8	18.7	17.8	16.9	16.2	15.5	14.9	14.3	13.8	13.3	12.9	12.5	12.1	11.8	11.5	11.2	-	-	-	-	320
340	56.5	47.6	41.2	36.4	32.6	29.6	27.2	25.1	23.4	21.9	20.7	19.5	18.5	17.7	16.9	16.2	15.5	14.9	14.4	13.9	13.5	13.1	12.7	12.3	12.0	11.7	-	-	-	-	340
360	58.7	49.4	42.8	37.8	33.9	30.8	28.3	26.1	24.4	22.8	21.5	20.3	19.3	18.4	17.6	16.8	16.2	15.6	15.0	14.5	14.0	13.6	13.2	12.9	12.5	12.2	-	-	-	-	360
380	60.9	51.3	44.4	39.2	35.2	32.0	29.3	27.2	25.3	23.7	22.3	21.1	20.1	19.1	18.3	17.5	16.8	16.2	15.6	15.1	14.6	14.2	13.8	13.4	13.0	12.7	-	-	-	-	380
400	63.1	53.1	46.0	40.6	36.5	33.1	30.4	28.2	26.2	24.5	23.2	21.9	20.8	19.8	19.0	18.2	17.5	16.8	16.2	15.7	15.2	14.7	14.3	13.9	13.5	13.2	-	-	-	-	400
420	65.3	55.0	47.6	42.1	37.8	34.3	31.5	29.2	27.2	25.5	24.0	22.7	21.6	20.6	19.7	18.8	18.1	17.4	16.8	16.3	15.7	15.3	14.8	14.4	14.0	13.7	-	-	-	-	420
440	67.5	56.8	49.2	43.5	39.0	35.5	32.6	30.2	28.1	26.4	24.8	23.5	22.3	21.3	20.3	19.5	18.7	18.1	17.4	16.8	16.3	15.8	15.4	14.9	14.5	14.2	-	-	-	-	440
460	69.7	58.7	50.8	44.9	40.3	36.7	33.7	31.2	29.1	27.2	25.7	24.3	23.1	22.0	21.0	20.2	19.4	18.7	18.0	17.4	16.9	16.4	15.9	15.5	15.1	14.7	-	-	-	-	460
480	71.8	60.5	52.4	46.3	41.6	37.8	34.8	32.2	30.0	28.1	26.5	25.1	23.8	22.7	21.7	20.8	20.0	19.3	18.6	18.0	17.4	16.9	16.4	16.0	15.6	15.2	-	-	-	-	480
500	74.0	62.4	54.0	47.8	42.9	39.0	35.8	33.2	30.9	29.0	27.3	25.9	24.6	23.5	22.4	21.5	20.7	19.9	19.2	18.6	18.0	17.5	17.0	16.5	16.1	15.7	-	-	-	-	500
600	85.0	71.8	62.1	54.9	49.3	44.9	41.2	38.2	35.6	33.4	31.5	29.9	28.4	27.1	25.9	24.8	23.9	23.0	22.2	21.5	20.8	20.2	19.6	19.1	18.6	18.2	-	-	-	-	600
700	95.9	80.9	70.1	62.0	55.8	50.8	46.7	43.2	40.3	37.9	35.7	33.8	32.2	30.7	29.4	28.2	27.1	26.1	25.2	24.4	23.7	23.0	22.3	21.7	21.2	20.7	-	-	-	-	700
800	106.9	90.1	78.2	69.2	62.2	56.6	52.1	48.3	45.0	42.3	39.9	37.8	35.9	34.3	32.8	31.5	30.3	29.2	28.2	27.3	26.5	25.7	25.0	24.3	23.7	23.1	-	-	-	-	800
900	117.8	99.4	86.2	76.3	68.6	62.5	57.5	53.3	49.7	46.7	44.1	41.6	39.7	37.9	36.3	34.8	33.5	32.3	31.2	30.2	29.3	28.5	27.7	26.9	26.3	25.6	-	-	-	-	900
1000	128.7	108.6	94.2	83.5	75.1	68.4	62.9	58.3	54.4	51.1	48.2	45.7	43.5	41.5	39.8	38.2	36.7	35.4	34.2	33.2	32.1	31.2	30.4	29.6	28.8	28.1	-	-	-	-	1000
1100	139.7	117.9	102.3	90.6	81.5	74.2	68.3	63.3	59.1	55.5	52.4	49.7	47.3	45.2	43.2	41.5	40.0	38.5	37.3	36.1	35.0	34.0	33.0	32.2	31.4	30.6	-	-	-	-	1100
1200	150.6	127.1	110.3	97.7	87.9	80.1	73.7	68.4	63.8	60.0	56.6	53.7	51.1	48.8	46.7	44.9	43.2	41.6	40.3	39.0	37.8	36.7	35.7	34.8	33.9	33.1	-	-	-	-	1200
1300	161.6	136.4	118.4	104.9	94.4	86.0	79.1	73.4	68.5	64.4	60.8	57.6	54.9	52.4	50.2	48.2	46.4	44.8	43.3	41.9	40.6	39.5	38.4	37.4	36.5	35.6	-	-	-	-	1300
1400	172.5	145.6	126.4	112.0	100.8	91.8	84.5	78.4	73.2	68.8	65.0	61.6	58.6	56.0	53.6	51.5	49.6	47.9	46.3	44.8	43.5	42.2	41.1	40.0	39.0	38.1	-	-	-	-	1400
1500	183.4	154.9	134.5	119.1	107.2	97.7	89.9	83.4	77.9	73.2	69.1	65.6	62.4	59.6	57.1	54.9	52.8	51.0	49.3	47.7	46.3	45.0	43.7	42.6	41.6	40.6	-	-	-	-	1500
1600	194.4	164.1	142.5	126.3	113.7	103.6	95.3	88.5	82.6	77.6	73.3	69.5	66.2	63.2	60.6	58.2	56.0	54.1	52.3	50.6	49.1	47.7	46.4	45.2	44.1	43.1	-	-	-	-	1600
1700	205.3	173.4	150.5	133.4	120.1	109.5	100.7	93.5	87.3	82.1	77.5	73.5	70.0	66.9	64.0	61.5	59.2	57.2	55.3	53.5	51.9	50.5	49.1	47.8	46.7	45.6	-	-	-	-	1700
1800	216.3	182.6	158.6	140.6	126.5	115.3	106.2	98.5	92.0	86.5	81.7	77.5	73.8	70.5	67.5	64.9	62.5	60.3	58.3	56.5	54.8	53.2	51.8	50.4	49.2	48.0	-	-	-	-	1800
1900	227.2	191.9	166.6	147.7	133.0	121.2	111.6	103.5	96.7	90.9	85.9	81.4	77.6	74.1	71.0	68.2	65.7	63.4	61.3	59.4	57.6	56.0	54.5	53.1	51.8	50.5	-	-	-	-	1900
2000	238.1	201.1	174.7	154.8	139.4	127.1	117.0	108.6	101.4	95.3	90.0	85.4	81.3	77.7	74.5	71.5	68.9	66.5	64.3	62.3	60.4	58.7	57.1	55.7	54.3	53.0	-	-	-	-	2000
2100	249.1	210.4	182.7	162.0	145.8	132.9	122.4	113.6	106.1	99.8	94.2	89.4	85.1	81.3	77.9	74.9	72.1	69.6	67.3	65.2	63.3	61.5	59.8	58.3	56.8	55.5	-	-	-	-	2100
2200	260.0	219.6	190.8	169.1	152.3	138.8	127.8	118.6	110.8	104.2	98.4	93.4	88.9	84.9	81.4	78.2	75.3	72.7	70.3	68.1	66.1	64.2	62.5	60.9	59.4	58.0	-	-	-	-	2200
2300	271.0	228.9	198.8	176.2	158.7	144.7	133.2	123.6	115.5	108.6	102.6	97.3	92.7	88.6	84.9	81.5	78.5	75.8	73.4	71.0	68.8	67.0	65.2	63.5	61.9	60.5	-	-	-	-	2300
2400	281.9	238.1	206.8	183.4	165.1	150.5	138.6	128.7	120.2	113.0	106.8	101.3	96.5	92.2	88.3	84.9	81.7	78.9	76.4	73.9	71.7	69.7	67.8	66.1	64.5	63.0	-	-	-	-	2400
Term. 2/	19.332	16.110	13.809	12.083	10.740	9.666	8.787	8.055	7.435	6.904	6.444	6.041	5.686	5.370	5.087	4.833	4.603	4.394	4.203	4.028	3.866	3.718	3.580	3.452	3.333	3.222	-	-	-	-	Term. 2/
L. H. 3/	.109400	.092500	.080429	.071375	.064333	.058700	.054091	.050250	.047000	.044214	.041800	.039688	.037824	.036167	.034684	.033350	.032143	.031045	.030043	.029125	.028280	.027500	.026778	.026107	.025485	.024900	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 19.6 tons and a ratio of empty car miles to loaded car miles of 0.879. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.23.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.33.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.55.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.71.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 69.—TERRITORY NO. 10 - MOUNTAIN PACIFIC

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	18.0	15.0	12.9	11.3	10.1	9.1	8.2	7.6	7.0	6.5	6.1	5.7	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.1	-	-	-	-	10
20	19.5	16.2	13.9	12.2	10.9	9.8	8.9	8.2	7.6	7.1	6.6	6.2	5.8	5.5	5.2	5.0	4.8	4.5	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4	-	-	-	-	20
30	20.9	17.4	15.0	13.1	11.7	10.6	9.6	8.8	8.2	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.2	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	3.7	-	-	-	-	30
40	22.3	18.6	16.0	14.1	12.5	11.3	10.3	9.5	8.8	8.2	7.6	7.2	6.8	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	-	-	-	-	40
50	23.7	19.8	17.1	15.0	13.4	12.1	11.0	10.1	9.4	8.7	8.2	7.7	7.3	6.9	6.5	6.2	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	-	-	-	-	50
60	25.1	21.0	18.1	15.9	14.2	12.8	11.7	10.8	10.0	9.3	8.7	8.2	7.7	7.3	7.0	6.6	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	-	-	-	-	60
70	26.6	22.2	19.1	16.8	15.0	13.6	12.4	11.4	10.6	9.8	9.2	8.7	8.2	7.8	7.4	7.1	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.0	4.9	-	-	-	-	70
80	28.0	23.4	20.2	17.7	15.8	14.3	13.1	12.0	11.2	10.4	9.8	9.2	8.7	8.2	7.8	7.5	7.1	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.4	5.2	-	-	-	-	80
90	29.4	24.6	21.2	18.6	16.6	15.1	13.8	12.7	11.7	11.0	10.3	9.7	9.2	8.7	8.3	7.9	7.5	7.2	7.0	6.7	6.5	6.2	6.0	5.8	5.7	5.5	-	-	-	-	90
100	30.8	25.8	22.2	19.6	17.5	15.8	14.4	13.3	12.3	11.5	10.8	10.2	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.1	6.8	6.6	6.4	6.2	6.0	5.8	-	-	-	-	100
120	33.7	28.2	24.3	21.4	19.1	17.3	15.8	14.6	13.5	12.6	11.9	11.2	10.6	10.0	9.6	9.1	8.7	8.4	8.1	7.8	7.5	7.2	7.0	6.8	6.6	6.4	-	-	-	-	120
140	36.5	30.6	26.4	23.2	20.8	18.8	17.2	15.9	14.7	13.8	12.9	12.2	11.5	10.9	10.4	10.0	9.5	9.2	8.8	8.5	8.2	7.9	7.7	7.4	7.2	7.0	-	-	-	-	140
160	39.3	33.0	28.5	25.1	22.4	20.3	18.6	17.1	15.9	14.9	14.0	13.2	12.5	11.8	11.3	10.8	10.3	9.9	9.6	9.2	8.9	8.6	8.3	8.1	7.8	7.6	-	-	-	-	160
180	42.2	35.4	30.5	26.9	24.1	21.8	20.0	18.4	17.1	16.0	15.0	14.2	13.4	12.8	12.2	11.6	11.1	10.7	10.3	9.9	9.6	9.3	9.0	8.7	8.5	8.2	-	-	-	-	180
200	45.0	37.8	32.6	28.7	25.7	23.3	21.3	19.7	18.3	17.1	16.1	15.2	14.4	13.7	13.0	12.5	11.9	11.5	11.0	10.6	10.3	9.9	9.6	9.4	9.1	8.8	-	-	-	-	200
220	47.8	40.2	34.7	30.6	27.4	24.8	22.7	21.0	19.5	18.2	17.1	16.2	15.3	14.6	13.9	13.3	12.7	12.2	11.8	11.4	11.0	10.6	10.3	10.0	9.7	9.4	-	-	-	-	220
240	50.7	42.6	36.8	32.4	29.0	26.3	24.1	22.2	20.7	19.3	18.2	17.2	16.3	15.5	14.8	14.1	13.5	13.0	12.5	12.1	11.7	11.3	11.0	10.6	10.3	10.0	-	-	-	-	240
260	53.5	45.0	38.8	34.2	30.7	27.8	25.5	23.5	21.9	20.5	19.2	18.2	17.2	16.4	15.6	14.9	14.3	13.8	13.3	12.8	12.4	12.0	11.6	11.3	10.9	10.7	-	-	-	-	260
280	56.4	47.3	40.9	36.1	32.3	29.3	26.8	24.8	23.1	21.6	20.3	19.2	18.2	17.3	16.5	15.8	15.1	14.5	14.0	13.5	13.1	12.6	12.3	11.9	11.6	11.3	-	-	-	-	280
300	59.2	49.7	43.0	37.9	34.0	30.8	28.2	26.1	24.2	22.7	21.3	20.2	19.1	18.2	17.3	16.6	15.9	15.3	14.7	14.2	13.8	13.3	12.9	12.5	12.2	11.9	-	-	-	-	300
320	62.0	52.1	45.0	39.7	35.6	32.3	29.6	27.3	25.4	23.8	22.4	21.1	20.1	19.1	18.2	17.4	16.7	16.1	15.5	15.0	14.5	14.0	13.6	13.2	12.8	12.5	-	-	-	-	320
340	64.9	54.5	47.1	41.6	37.3	33.8	31.0	28.6	26.6	24.9	23.4	22.1	21.0	20.0	19.1	18.3	17.5	16.8	16.2	15.7	15.2	14.7	14.2	13.8	13.4	13.1	-	-	-	-	340
360	67.7	56.9	49.2	43.4	38.9	35.3	32.4	29.9	27.8	26.0	24.5	23.1	22.0	20.9	19.9	19.1	18.3	17.6	17.0	16.4	15.8	15.3	14.9	14.5	14.1	13.7	-	-	-	-	360
380	70.6	59.3	51.3	45.2	40.6	36.8	33.7	31.2	29.0	27.2	25.5	24.1	22.9	21.8	20.8	19.9	19.1	18.4	17.7	17.1	16.5	16.0	15.5	15.1	14.7	14.3	-	-	-	-	380
400	73.4	61.7	53.3	47.1	42.2	38.3	35.1	32.4	30.2	28.3	26.6	25.1	23.8	22.7	21.7	20.8	19.9	19.2	18.5	17.8	17.2	16.7	16.2	15.7	15.3	14.9	-	-	-	-	400
420	76.2	64.1	55.4	48.9	43.8	39.8	36.5	33.7	31.4	29.4	27.7	26.1	24.8	23.6	22.5	21.6	20.7	19.9	19.2	18.5	17.9	17.4	16.9	16.4	15.9	15.5	-	-	-	-	420
440	79.1	66.5	57.5	50.7	45.5	41.3	37.9	35.0	32.6	30.5	28.7	27.1	25.7	24.5	23.4	22.4	21.5	20.7	19.9	19.3	18.6	18.1	17.5	17.0	16.5	16.1	-	-	-	-	440
460	81.9	68.9	59.6	52.6	47.1	42.8	39.2	36.3	33.8	31.6	29.8	28.1	26.7	25.4	24.3	23.2	22.3	21.5	20.7	20.0	19.3	18.7	18.2	17.7	17.2	16.7	-	-	-	-	460
480	84.8	71.3	61.6	54.4	48.8	44.3	40.6	37.6	35.0	32.7	30.8	29.1	27.6	26.3	25.1	24.1	23.1	22.2	21.4	20.7	20.0	19.4	18.8	18.3	17.8	17.3	-	-	-	-	480
500	87.6	73.7	63.7	56.2	50.4	45.8	42.0	38.8	36.2	33.9	31.9	30.1	28.6	27.2	26.0	24.9	23.9	23.0	22.2	21.4	20.7	20.1	19.5	18.9	18.4	17.9	-	-	-	-	500
600	101.8	85.6	74.1	65.4	58.7	53.3	48.9	45.2	42.1	39.4	37.1	35.1	33.3	31.7	30.3	29.0	27.9	26.8	25.9	25.0	24.2	23.5	22.8	22.1	21.5	21.0	-	-	-	-	600
700	116.0	97.6	84.4	74.6	66.9	60.8	55.8	51.6	48.1	45.0	42.4	40.1	38.1	36.3	34.6	33.2	31.9	30.7	29.6	28.6	27.7	26.8	26.0	25.3	24.6	24.0	-	-	-	-	700
800	130.2	109.5	94.6	83.8	75.2	68.3	62.7	58.0	54.0	50.6	47.7	45.1	42.8	40.8	39.0	37.3	35.9	34.5	33.3	32.2	31.2	30.2	29.3	28.5	27.7	27.0	-	-	-	-	800
900	144.4	121.5	105.2	92.9	83.4	75.8	69.6	64.4	60.0	56.2	52.9	50.1	47.5	45.3	43.3	41.5	39.9	38.4	37.0	35.8	34.6	33.6	32.6	31.7	30.9	30.1	-	-	-	-	900
1000	158.6	133.5	115.5	102.1	91.6	83.3	76.4	70.7	65.9	61.8	58.2	55.1	52.3	49.8	47.6	45.6	43.9	42.2	40.7	39.4	38.1	37.0	35.9	34.9	34.0	33.1	-	-	-	-	1000
1100	172.8	145.4	125.9	111.3	99.8	90.8	83.3	77.1	71.9	67.4	63.5	60.0	57.0	54.3	51.9	49.8	47.8	46.1	44.4	43.0	41.6	40.3	39.2	38.1	37.1	36.1	-	-	-	-	1100
1200	187.0	157.4	136.3	120.4	108.1	98.3	90.2	83.5	77.8	72.9	68.7	65.0	61.8	58.9	56.3	53.9	51.8	49.9	48.2	46.5	45.1	43.7	42.4	41.3	40.2	39.2	-	-	-	-	1200
1300	201.2	169.4	146.7	129.6	116.4	105.8	97.1	89.9	83.8	78.5	74.0	70.0	66.5	63.4	60.6	58.1	55.8	53.8	51.9	50.1	48.6	47.1	45.7	44.5	43.3	42.2	-	-	-	-	1300
1400	215.3	181.3	157.0	138.8	124.6	113.3	104.0	96.3	89.7	84.1	79.2	75.0	71.2	67.9	64.9	62.2	59.8	57.6	55.6	53.7	52.0	50.5	49.0	47.7	46.4	45.2	-	-	-	-	1400
1500	229.5	193.3	167.4	148.0	132.9	120.8	110.9	102.6	95.7	89.7	84.5	80.0	76.0	72.4	69.2	66.4	63.8	61.4	59.3	57.3	55.5	53.8	52.3	50.8	49.5	48.3	-	-	-	-	1500
1600	243.7	205.2	177.8	157.1	141.1	128.3	117.8	109.0	101.6	95.3	89.8	85.0	80.7	76.9	73.6	70.5	67.8	65.3	63.0	60.9	59.0	57.2	55.6	54.0	52.6	51.3	-	-	-	-	1600
1700	257.9	217.2	188.1	166.3	149.3	135.8	124.7	115.4	107.6	100.9	95.0	90.0	85.5	81.5	77.9	74.7	71.8	69.1	66.7	64.5	62.	60.6	58.8	57.2	55.7	54.3	-	-	-	-	1700
1800	272.1	229.2	198.5	175.5	157.6	143.3	131.5	121.8	113.5	106.4	100.2	94.9	90.2	86.0	82.2	78.8	75.8	73.0	70.4	68.1	65.9	64.0	62.1	60.4	58.8	57.4	-	-	-	-	1800
1900	286.3	241.1	208.9	184.7	165.8	150.8	138.4	128.2	119.5	112.0	105.6	99.9	94.8	90.5	86.5	83.0	79.8	76.8	74.1	71.7	69.4	67.3	65.4	63.6	61.9	60.4	-	-	-	-	1900
2000	300.5	253.1	219.2	193.8	174.1	158.3	145.3	134.6	125.4	117.6	110.8	104.9	99.7	95.0	90.9	87.1	83.7	80.7	77.9	75.3	72.9	70.7	68.7	66.8	65.1	63.4	-	-	-	-	2000
2100	314.7	265.1	229.6	203.0	182.3	165.8	152.2	140.9	131.4	123.2	116.1	109.9	104.4	99.6	95.2	91.3	87.7	84.5	81.6	78.9	76.4	74.1	72.0	70.0	68.2	66.5	-	-	-	-	2100
2200	328.9	277.0	240.0	212.2	190.6	173.3	159.1	147.3	137.3	128.8	121.4	114.9	109.2	104.1	99.5	95.4	91.7	88.4	85.3	82.5	79.9	77.5	75.3	73.2	71.3	69.5	-	-	-	-	2200
2300	343.1	289.0	250.3	221.3	198.8	180.8	166.0	153.7	143.3	134.4	126.6	119.9	113.9	108.6	103.8	99.6	95.7	92.2	89.0	86.0	83.3	80.8	78.5	76.4	74.4	72.5	-	-	-	-	2300
2400	357.3	300.9	260.7	230.5	207.0	188.2	172.9	160.1	149.2	139.9	131.9	124.9	118.6	113.1	108.2	103.7	99.7	96.0	92.7	89.6	86.8	84.2	81.8	79.6	77.5	75.6	-	-	-	-	2400
Term. 2/	16.618	13.848	11.870	10.386	9.232	8.309	7.554	6.924	6.392	5.935	5.539	5.193	4.888	4.616	4.373	4.159	3.957	3.777	3.613	3.462	3.324	3.196	3.077	2.968	2.865	2.770	-	-	-	-	Term. 2/
L. H. 3/	.141950	.119625	.103679	.091719	.082417	.074975	.068886	.063813	.059519	.055870	.052650	.049859	.047397	.045208	.043250	.041488	.039893	.038443	.037120	.035906	.034790	.033760	.032806	.031920	.031095	.030325	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.734. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown here by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.23.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.33.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.20.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.55.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.71.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 10 - Mountain Pacific

LESS-CARLOAD

TABLE 70.—TERRITORY NO. 10 - MOUNTAIN PACIFIC

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																										Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	92.0	73.5	64.3	58.7	55.0	52.4	50.4	48.9	47.6	46.6	45.8	45.1	44.5	44.0	43.5	43.1	42.7	42.4	42.1	41.8	41.6	41.4	41.2	41.0	40.8	40.7	40.5	40.4	40.3	10
20	96.4	76.5	66.6	60.6	56.6	53.8	51.7	50.0	48.7	47.6	46.7	45.9	45.3	44.7	44.2	43.8	43.4	43.0	42.7	42.4	42.2	41.9	41.7	41.5	41.3	41.2	41.0	40.9	40.7	20
30	100.9	79.6	68.9	62.5	58.2	55.2	52.9	51.1	49.7	48.5	47.6	46.8	46.1	45.4	44.9	44.4	44.0	43.6	43.3	43.0	42.7	42.5	42.2	42.0	41.8	41.7	41.5	41.3	41.2	30
40	105.4	82.6	71.2	64.4	59.9	56.6	54.2	52.3	50.7	49.5	48.5	47.6	46.8	46.2	45.6	45.1	44.7	44.3	43.9	43.6	43.3	43.0	42.8	42.5	42.3	42.1	42.0	41.8	41.6	40
50	109.9	85.7	73.6	66.3	61.5	58.0	55.4	53.4	51.8	50.5	49.4	48.4	47.6	46.9	46.3	45.8	45.3	44.9	44.5	44.2	43.9	43.6	43.3	43.1	42.8	42.6	42.4	42.3	42.1	50
60	114.4	88.7	75.9	68.2	63.1	59.4	56.7	54.5	52.8	51.4	50.3	49.3	48.4	47.7	47.0	46.5	46.0	45.5	45.1	44.8	44.4	44.1	43.8	43.6	43.3	43.1	42.9	42.7	42.6	60
70	118.8	91.8	78.2	70.1	64.7	60.8	57.9	55.7	53.8	52.4	51.1	50.1	49.2	48.4	47.8	47.2	46.6	46.1	45.7	45.3	45.0	44.7	44.4	44.1	43.8	43.6	43.4	43.2	43.0	70
80	123.3	94.8	80.5	72.0	66.3	62.2	59.2	56.8	54.9	53.3	52.0	50.9	50.0	49.2	48.5	47.8	47.3	46.8	46.3	45.9	45.5	45.2	44.9	44.6	44.4	44.1	43.9	43.7	43.5	80
90	127.8	97.8	82.9	73.9	67.9	63.6	60.4	57.9	55.9	54.3	52.9	51.8	50.8	49.9	49.2	48.5	47.9	47.4	46.9	46.5	46.1	45.8	45.4	45.1	44.9	44.6	44.4	44.1	43.9	90
100	132.3	100.9	85.2	75.8	69.5	65.0	61.7	59.0	56.9	55.2	53.8	52.6	51.6	50.7	49.9	49.2	48.6	48.0	47.5	47.1	46.7	46.3	46.0	45.6	45.4	45.1	44.8	44.6	44.4	100
120	141.2	107.0	89.8	79.6	72.7	67.8	64.1	61.3	59.0	57.1	55.6	54.3	53.1	52.2	51.3	50.5	49.9	49.3	48.7	48.2	47.8	47.4	47.0	46.7	46.4	46.1	45.8	45.5	45.3	120
140	150.2	113.1	94.5	83.4	75.9	70.6	66.6	63.6	61.1	59.0	57.4	55.9	54.7	53.6	52.7	51.9	51.2	50.5	49.9	49.4	48.9	48.5	48.1	47.7	47.4	47.0	46.8	46.5	46.2	140
160	159.2	119.2	99.1	87.1	79.1	73.4	69.1	65.8	63.1	61.0	59.1	57.6	56.3	55.1	54.1	53.3	52.5	51.8	51.1	50.6	50.0	49.6	49.1	48.7	48.4	48.0	47.7	47.4	47.1	160
180	168.1	125.2	103.6	90.9	82.4	76.2	71.6	68.1	65.2	62.9	60.9	59.3	57.9	56.6	55.6	54.6	53.8	53.0	52.3	51.7	51.2	50.7	50.2	49.8	49.4	49.0	48.7	48.4	48.1	180
200	177.1	131.3	108.5	94.7	85.6	79.0	74.1	70.3	67.3	64.8	62.7	60.9	59.4	58.1	57.0	56.0	55.1	54.3	53.5	52.9	52.3	51.8	51.3	50.8	50.4	50.0	49.6	49.3	49.0	200
220	186.0	137.4	113.1	98.5	88.8	81.8	76.6	72.6	69.3	66.7	64.5	62.6	61.0	59.6	58.4	57.3	56.4	55.5	54.8	54.1	53.4	52.8	52.3	51.8	51.4	51.0	50.6	50.2	49.9	220
240	195.0	143.5	117.6	102.3	92.0	84.6	79.1	74.8	71.4	68.6	66.3	64.3	62.6	61.1	59.8	58.7	57.7	56.8	56.0	55.2	54.5	53.9	53.4	52.9	52.4	51.9	51.5	51.2	50.8	240
260	204.0	149.6	122.4	106.1	95.2	87.4	81.6	77.1	73.5	70.5	68.0	65.9	64.1	62.6	61.2	60.0	59.0	58.0	57.2	56.4	55.7	55.0	54.4	53.9	53.4	52.9	52.5	52.1	51.7	260
280	212.9	155.7	127.1	109.9	98.4	90.3	84.1	79.4	75.5	72.4	69.8	67.6	65.7	64.1	62.7	61.4	60.3	59.3	58.4	57.5	56.8	56.1	55.5	54.9	54.4	53.9	53.5	53.0	52.6	280
300	221.9	161.8	131.7	113.7	101.6	93.1	86.6	81.6	77.6	74.3	71.6	69.3	67.3	65.6	64.1	62.7	61.6	60.5	59.6	58.7	57.9	57.2	56.6	56.0	55.4	54.9	54.4	54.0	53.6	300
320	230.8	167.9	136.4	117.5	104.9	95.9	89.1	83.9	79.7	76.2	73.4	70.9	68.9	67.1	65.5	64.1	62.9	61.8	60.8	59.9	59.1	58.3	57.6	57.0	56.4	55.9	55.4	54.9	54.5	320
340	239.8	173.9	141.0	121.2	108.1	98.7	91.6	86.1	81.7	78.1	75.1	72.6	70.4	68.6	66.9	65.5	64.2	63.0	62.0	61.0	60.2	59.4	58.7	58.0	57.4	56.9	56.3	55.8	55.4	340
360	248.8	180.0	145.7	125.0	111.3	101.5	94.1	88.4	83.8	80.0	76.9	74.3	72.0	70.0	68.3	66.8	65.5	64.3	63.2	62.2	61.3	60.5	59.7	59.1	58.4	57.8	57.3	56.8	56.3	360
380	257.7	186.1	150.3	128.8	114.5	104.3	96.6	90.6	85.9	82.0	78.7	75.9	73.6	71.5	69.7	68.2	66.8	65.5	64.4	63.4	62.4	61.6	60.8	60.1	59.4	58.8	58.2	57.7	57.2	380
400	266.7	192.2	155.0	132.6	117.7	107.1	99.1	92.9	87.9	83.9	80.5	77.6	75.2	73.0	71.2	69.5	68.1	66.8	65.6	64.5	63.6	62.7	61.9	61.1	60.4	59.8	59.2	58.7	58.1	400
420	275.6	198.3	159.6	136.4	120.9	109.9	101.6	95.2	90.0	85.8	82.3	79.3	76.7	74.5	72.6	70.9	69.4	68.0	66.8	65.7	64.7	63.8	62.9	62.1	61.4	60.8	60.2	59.6	59.1	420
440	284.6	204.4	164.3	140.2	124.1	112.7	104.1	97.4	92.1	87.7	84.0	81.0	78.3	76.0	74.0	72.2	70.7	69.3	68.0	66.8	65.8	64.9	64.0	63.2	62.4	61.8	61.1	60.5	60.0	440
460	293.6	210.5	168.9	144.0	127.4	115.5	106.6	99.7	94.1	89.6	85.8	82.6	79.9	77.5	75.4	73.6	72.0	70.5	69.2	68.0	66.9	65.9	65.0	64.2	63.4	62.7	62.1	61.5	60.9	460
480	302.5	216.6	173.6	147.8	130.6	118.3	109.1	101.9	96.2	91.5	87.6	84.3	81.5	79.0	76.8	74.9	73.3	71.8	70.4	69.2	68.1	67.0	66.1	65.2	64.5	63.7	63.0	62.4	61.8	480
500	311.5	222.6	178.2	151.6	133.8	121.1	111.6	104.2	98.3	93.4	89.4	86.0	83.0	80.5	78.3	76.3	74.6	73.0	71.6	70.3	69.2	68.1	67.2	66.3	65.5	64.7	64.0	63.3	62.7	500
600	356.3	253.1	201.5	170.5	149.9	135.1	124.1	115.5	108.6	103.0	98.3	94.3	90.9	87.9	85.4	83.1	81.1	79.3	77.6	76.1	74.8	73.6	72.5	71.4	70.5	69.6	68.8	68.0	67.3	600
700	401.1	283.5	224.7	189.5	165.9	149.1	136.6	126.8	118.9	112.5	107.2	102.6	98.8	95.4	92.5	89.9	87.6	85.5	83.6	82.0	80.4	79.0	77.8	76.6	75.5	74.5	73.6	72.7	71.9	700
800	445.9	314.0	248.0	208.4	182.0	163.2	149.0	138.0	129.2	122.0	116.1	111.0	106.6	102.9	99.6	96.6	94.1	91.7	89.7	87.8	86.1	84.5	83.1	81.7	80.5	79.4	78.4	77.4	76.5	800
900	490.7	344.4	271.2	227.3	198.1	177.2	161.5	149.3	139.6	131.6	124.9	119.3	114.5	110.3	106.6	103.4	100.6	98.0	95.7	93.6	91.7	90.0	88.4	86.9	85.6	84.3	83.1	82.1	81.1	900
1000	535.5	374.8	294.5	246.3	214.2	191.2	174.0	160.6	149.9	141.1	133.8	127.7	122.4	117.8	113.7	110.2	107.1	104.2	101.7	99.4	97.3	95.4	93.7	92.1	90.6	89.2	87.9	86.7	85.6	1000
1100	580.3	405.3	317.7	265.2	230.2	205.2	186.5	171.9	160.2	150.7	142.7	136.0	130.2	125.2	120.8	117.0	113.6	110.5	107.7	105.2	102.9	100.9	99.0	97.2	95.6	94.1	92.7	91.4	90.2	1100
1200	625.1	435.7	341.0	284.2	246.3	219.2	199.0	183.2	170.6	160.2	151.6	144.3	138.1	132.7	127.9	123.8	120.1	116.7	113.7	111.0	108.6	106.5	104.3	102.4	100.6	99.0	97.5	96.1	94.8	1200
1300	669.9	466.1	364.3	303.1	262.4	233.3	211.4	194.5	180.9	169.8	160.5	152.7	146.0	140.1	135.0	130.5	126.5	123.0	119.8	116.8	114.2	111.8	109.6	107.5	105.7	103.9	102.3	100.8	99.4	1300
1400	714.7	496.6	387.5	322.1	278.4	247.3	223.9	205.8	191.2	179.3	169.4	161.0	153.8	147.6	142.1	137.3	133.0	129.2	125.8	122.7	119.8	117.2	114.9	112.7	110.7	108.8	107.1	105.5	104.0	1400
1500	759.5	527.0	410.8	341.0	294.5	261.3	236.4	217.0	201.5	188.9	178.3	169.3	161.7	155.0	149.2	144.1	139.5	135.5	131.8	128.5	125.5	122.7	120.2	117.8	115.7	113.7	111.9	110.2	108.6	1500
1600	804.3	557.4	434.0	360.0	310.6	275.3	248.9	228.3	211.9	198.4	187.2	177.7	169.6	162.5	156.3	150.9	146.0	141.7	137.8	134.3	131.1	128.2	125.5	123.0	120.7	118.6	116.7	114.8	113.1	1600
1700	849.1	587.9	457.3	378.9	326.7	289.4	261.4	239.6	222.2	208.0	196.1	186.0	177.4	169.9	163.4	157.7	152.5	148.0	143.8	140.1	136.7	133.6	130.8	128.2	125.8	123.5	121.4	119.5	117.7	1700
1800	893.9	618.3	480.5	397.9	342.7	303.4	273.9	250.9	232.5	217.5	205.0	194.4	185.3	177.4	170.5	164.4	159.0	154.2	149.9	145.9	142.3	139.1	136.1	133.3	130.8	128.4	126.2	124.2	122.3	1800
1900	938.7	648.8	503.8	416.8	358.8	317.4	286.3	262.2	242.8	227.0	213.9	202.7	193.1	184.9	177.6	171.2	165.5	160.2	155.9	151.7	148.0	144.5	141.4	138.5	135.8	133.3	131.0	128.9	126.9	1900
2000	983.5	679.2	527.0	435.8	374.9	331.4	298.8	273.5	253.2	236.6	222.8	211.0	201.0	192.3	184.7	178.0	172.0	166.7	161.9	157.5	153.6	150.0	146.7	143.6	140.8	138.2	135.8	133.6	131.5	2000
2100	1,028.3	709.6	550.3	454.7	391.0	345.4	311.3	284.8	263.5	246.1	231.6	219.4	208.9	199.8	191.8	184.8	178.5	172.9	167.9	163.4	159.2	155.4	152.0	148.8	145.9	143.1	140.6	138.2	136.0	2100
2200	1,073.1	740.1	573.6	473.6	407.0	359.5	323.8	296.0	273.8	255.7	240.5	227.7	216.7	207.2	198.9	191.5	185.0	179.2	173.9	169.2	164.8	160.9	157.3	153.9	150.9	148.0	145.4	142.9	140.6	2200
2300	1,117.9	770.5	596.8	492.6	423.1	373.5	336.3	307.3	284.2	265.2	249.4	236.1	224.6	214.7	206.0	198.3	191.5	185.4	179.9	175.0	170.5	166.4	162.6	159.1	155.9	152.9	150.2	147.6	146.2	2300
2400	1,162.7	800.9	620.1	511.5	439.2	387.5	348.8	318.6	294.5	274.8	258.3	244.4	232.5	222.1	213.1	205.1	198.0	191.7	186.0	180.8	176.1	171.8	167.9	164.3	160.9	157.8	155.0	152.3	149.8	2400
Term. 2/	87.480	70.455	61.940	56.830	53.425	50.995	49.170	47.750	46.615	45.685	44.915	44.260	43.695	43.210	42.785	42.410	42.075	41.775	41.510	41.265	41.045	40.840	40.655	40.485	40.330	40.185	40.050	39.925	39.815	Term. 2/
L. H. 3/	.44800	.30437	.23255	.18946	.16073	.14021	.12483	.11286	.10328	.09545	.08892	.08339	.07866	.07455	.07096	.06779	.06498	.06246	.06019	.05814	.05627	.05457	.05301	.05157	.05025	.04902	.04788	.04682	.04583	L. H. 3/

1/ Based on a tare weight of 22.7 tons and a ratio of empty car miles to loaded car miles of 0.333. The Less-carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.22.

For Cost Level III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.31.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 11 - Total Western, incl. Southwestern, West. Trunk Line, Mt. Pac., No. Illinois and Sou. Missc.:

BOX CARS

TABLE 71.—TERRITORY NO. 11 - TOTAL WESTERN, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.0	16.7	14.3	12.5	11.2	10.1	9.1	8.4	7.7	7.2	6.7	6.3	5.9	5.6	5.3	5.1	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	10
20	20.9	17.5	15.0	13.1	11.7	10.5	9.6	8.8	8.1	7.6	7.1	6.6	6.3	5.9	5.6	5.3	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	20
30	21.8	18.2	15.6	13.7	12.2	11.0	10.0	9.2	8.5	7.9	7.4	7.0	6.6	6.2	5.9	5.6	5.4	5.1	4.9	4.7	4.6	4.4	4.2	4.1	4.0	3.8	3.7	3.6	3.5	3.4	30
40	22.7	19.0	16.3	14.3	12.8	11.5	10.5	9.6	8.9	8.3	7.8	7.3	6.9	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	40
50	23.6	19.7	17.0	14.9	13.3	12.0	10.9	10.1	9.3	8.7	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.7	5.4	5.2	5.0	4.9	4.7	4.5	4.4	4.3	4.1	4.0	3.9	3.8	50
60	24.5	20.5	17.6	15.5	13.8	12.5	11.3	10.5	9.7	9.1	8.5	8.0	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	4.0	60
70	25.4	21.2	18.3	16.1	14.3	13.0	11.8	10.9	10.1	9.4	8.8	8.3	7.9	7.4	7.1	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.2	5.0	4.8	4.7	4.6	4.4	4.3	4.2	70
80	26.3	22.0	18.9	16.7	14.9	13.5	12.3	11.3	10.5	9.8	9.2	8.6	8.2	7.8	7.4	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.4	80
90	27.2	22.8	19.6	17.2	15.4	13.9	12.7	11.7	10.9	10.2	9.5	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.8	4.7	4.6	90
100	28.1	23.5	20.3	17.8	15.9	14.4	13.2	12.2	11.3	10.5	9.9	9.3	8.8	8.4	8.0	7.6	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.7	5.5	5.3	5.2	5.1	4.9	4.8	100
120	29.8	25.0	21.6	19.0	17.0	15.4	14.1	13.0	12.1	11.3	10.6	10.0	9.4	9.0	8.6	8.2	7.8	7.5	7.2	7.0	6.7	6.5	6.3	6.1	5.9	5.8	5.6	5.5	5.3	5.2	120
140	31.6	26.5	22.9	20.2	18.1	16.4	15.0	13.8	12.8	12.0	11.3	10.6	10.1	9.6	9.1	8.7	8.4	8.0	7.7	7.5	7.2	7.0	6.8	6.6	6.4	6.2	6.0	5.9	5.7	5.6	140
160	33.4	28.1	24.2	21.4	19.1	17.3	15.9	14.7	13.6	12.7	12.0	11.3	10.7	10.2	9.7	9.3	8.9	8.6	8.3	8.0	7.7	7.4	7.2	7.0	6.8	6.6	6.5	6.3	6.1	6.0	160
180	35.2	29.6	25.6	22.5	20.2	18.3	16.8	15.5	14.4	13.5	12.7	12.0	11.4	10.8	10.3	9.9	9.5	9.1	8.8	8.5	8.2	7.9	7.7	7.5	7.2	7.1	6.9	6.7	6.5	6.4	180
200	37.0	31.1	26.9	23.7	21.3	19.3	17.7	16.3	15.2	14.2	13.4	12.6	12.0	11.4	10.9	10.4	10.0	9.6	9.3	9.0	8.7	8.4	8.1	7.9	7.7	7.5	7.3	7.1	6.9	6.8	200
220	38.8	32.6	28.2	24.9	22.3	20.3	18.6	17.2	16.0	15.0	14.1	13.3	12.6	12.0	11.5	11.0	10.6	10.2	9.8	9.5	9.1	8.9	8.6	8.4	8.1	7.9	7.7	7.5	7.4	7.2	220
240	40.6	34.1	29.5	26.1	23.4	21.2	19.5	18.0	16.8	15.7	14.8	14.0	13.3	12.6	12.1	11.6	11.1	10.7	10.3	10.0	9.6	9.3	9.1	8.8	8.6	8.3	8.1	7.9	7.8	7.6	240
260	42.4	35.6	30.8	27.2	24.4	22.2	20.4	18.8	17.6	16.4	15.5	14.6	13.9	13.2	12.7	12.1	11.6	11.2	10.8	10.5	10.1	9.8	9.5	9.3	9.0	8.8	8.6	8.4	8.2	8.0	260
280	44.1	37.2	32.2	28.4	25.5	23.2	21.3	19.7	18.3	17.2	16.2	15.3	14.5	13.9	13.2	12.7	12.2	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.4	9.2	9.0	8.8	8.6	8.4	280
300	45.9	38.7	33.5	29.6	26.6	24.2	22.2	20.5	19.1	17.9	16.9	16.0	15.2	14.5	13.8	13.3	12.7	12.3	11.8	11.4	11.1	10.7	10.4	10.1	9.9	9.6	9.4	9.2	9.0	8.8	300
320	47.7	40.2	34.8	30.8	27.6	25.1	23.1	21.4	19.9	18.7	17.6	16.7	15.8	15.1	14.4	13.8	13.3	12.8	12.4	11.9	11.6	11.2	10.9	10.6	10.3	10.1	9.8	9.6	9.4	9.2	320
340	49.5	41.7	36.1	31.9	28.7	26.1	24.0	22.2	20.7	19.4	18.3	17.3	16.5	15.7	15.0	14.4	13.8	13.3	12.9	12.4	12.0	11.7	11.4	11.0	10.8	10.5	10.2	10.0	9.8	9.6	340
360	51.3	43.2	37.4	33.1	29.8	27.1	24.9	23.0	21.5	20.1	19.0	18.0	17.1	16.3	15.6	15.0	14.4	13.9	13.4	12.9	12.5	12.2	11.8	11.5	11.2	10.9	10.7	10.4	10.2	10.0	360
380	53.1	44.7	38.8	34.3	30.8	28.0	25.8	23.9	22.3	20.9	19.7	18.7	17.7	16.9	16.2	15.5	14.9	14.4	13.9	13.4	13.0	12.6	12.3	11.9	11.6	11.3	11.1	10.8	10.6	10.4	380
400	54.9	46.2	40.1	35.5	31.9	29.0	26.7	24.7	23.0	21.6	20.4	19.3	18.4	17.5	16.8	16.1	15.5	14.9	14.4	13.9	13.5	13.1	12.7	12.4	12.1	11.8	11.5	11.2	11.0	10.8	400
420	56.7	47.8	41.4	36.7	32.9	30.0	27.6	25.5	23.8	22.4	21.1	20.0	19.0	18.1	17.4	16.7	16.0	15.4	14.9	14.4	14.0	13.6	13.2	12.8	12.5	12.2	11.9	11.7	11.4	11.2	420
440	58.4	49.3	42.7	37.8	34.0	31.0	28.5	26.4	24.6	23.1	21.8	20.7	19.6	18.7	17.9	17.2	16.6	16.0	15.4	14.9	14.5	14.0	13.7	13.3	13.0	12.6	12.3	12.1	11.8	11.6	440
460	60.2	50.8	44.1	39.0	35.1	31.9	29.4	27.2	25.4	23.8	22.5	21.3	20.3	19.4	18.5	17.8	17.1	16.5	15.9	15.4	15.0	14.5	14.1	13.7	13.4	13.1	12.8	12.5	12.2	12.0	460
480	62.0	52.3	45.4	40.2	36.1	32.9	30.3	28.0	26.2	24.6	23.2	22.0	20.9	20.0	19.1	18.3	17.7	17.0	16.4	15.9	15.4	15.0	14.6	14.2	13.8	13.5	13.2	12.9	12.6	12.4	480
500	63.8	53.9	46.7	41.4	37.2	33.9	31.2	28.9	27.0	25.3	23.9	22.7	21.6	20.6	19.7	18.9	18.2	17.6	17.0	16.4	15.9	15.5	15.0	14.6	14.3	13.9	13.6	13.3	13.0	12.8	500
600	72.7	61.4	53.3	47.2	42.5	38.7	35.6	33.1	30.9	29.0	27.4	26.0	24.7	23.6	22.6	21.7	20.9	20.2	19.5	18.9	18.3	17.8	17.3	16.9	16.5	16.1	15.7	15.4	15.0	14.7	600
700	81.7	69.0	59.9	53.1	47.8	43.6	40.1	37.3	34.8	32.7	30.9	29.3	27.9	26.7	25.6	24.6	23.7	22.8	22.1	21.4	20.8	20.2	19.6	19.1	18.7	18.2	17.8	17.4	17.1	16.7	700
800	90.6	76.6	66.5	59.0	53.1	48.5	44.6	41.4	38.7	36.4	34.4	32.7	31.1	29.7	28.5	27.4	26.4	25.5	24.6	23.9	23.2	22.5	21.9	21.4	20.9	20.4	19.9	19.5	19.1	18.7	800
900	99.5	84.1	73.1	64.9	58.5	53.3	49.1	45.6	42.7	40.1	37.9	36.0	34.3	32.8	31.4	30.2	29.1	28.1	27.2	26.4	25.6	24.9	24.2	23.6	23.0	22.5	22.0	21.6	21.1	20.7	900
1000	108.5	91.7	79.7	70.8	63.8	58.2	53.6	49.8	46.6	43.8	41.4	39.3	37.5	35.8	34.4	33.0	31.8	30.8	29.8	28.9	28.0	27.2	26.5	25.9	25.2	24.7	24.1	23.6	23.1	22.7	1000
1100	117.4	99.3	86.3	76.6	69.1	63.0	58.1	54.0	50.5	47.5	44.9	42.7	40.7	38.9	37.3	35.9	34.6	33.4	32.3	31.3	30.4	29.6	28.8	28.1	27.4	26.8	26.2	25.7	25.2	24.7	1100
1200	126.3	106.9	92.9	82.5	74.4	67.9	62.6	58.2	54.4	51.2	48.4	46.0	43.8	41.9	40.2	38.7	37.3	36.0	34.9	33.8	32.9	32.0	31.1	30.3	29.6	29.0	28.3	27.7	27.2	26.7	1200
1300	135.3	114.4	99.6	88.4	79.7	72.8	67.1	62.4	58.3	54.9	51.9	49.3	47.0	45.0	43.2	41.5	40.0	38.7	37.4	36.3	35.3	34.3	33.4	32.6	31.8	31.1	30.4	29.8	29.2	28.7	1300
1400	144.2	122.0	106.2	94.3	85.0	77.6	71.6	66.5	62.3	58.6	55.4	52.7	50.2	48.0	46.1	44.3	42.8	41.3	40.0	38.8	37.7	36.7	35.7	34.8	34.0	33.3	32.5	31.9	31.2	30.6	1400
1500	153.1	129.6	112.8	100.2	90.3	82.5	76.1	70.7	66.2	62.3	58.9	56.0	53.4	51.1	49.0	47.2	45.5	44.0	42.6	41.3	40.1	39.0	38.0	37.1	36.2	35.4	34.6	33.9	33.3	32.6	1500
1600	162.1	137.2	119.4	106.0	95.7	87.4	80.6	74.9	70.1	66.0	62.5	59.3	56.6	54.1	52.0	50.0	48.2	46.6	45.1	43.8	42.5	41.4	40.3	39.3	38.4	37.5	36.7	36.0	35.3	34.6	1600
1700	171.0	144.7	126.0	111.9	101.0	92.2	85.1	79.1	74.0	69.7	66.0	62.7	59.8	57.2	54.9	52.8	50.9	49.2	47.7	46.3	44.9	43.7	42.6	41.6	40.6	39.7	38.8	38.1	37.3	36.6	1700
1800	179.9	152.3	132.6	117.8	106.3	97.1	89.5	83.3	78.0	73.4	69.5	66.0	63.0	60.3	57.8	55.7	53.7	51.9	50.2	48.7	47.4	46.1	44.9	43.8	42.8	41.8	40.9	40.1	39.3	38.6	1800
1900	188.9	159.9	139.2	123.7	111.6	101.9	94.0	87.5	81.9	77.1	73.0	69.3	66.1	63.3	60.8	58.5	56.4	54.5	52.8	51.2	49.8	48.4	47.2	46.1	45.0	44.0	43.1	42.2	41.4	40.6	1900
2000	197.8	167.5	145.8	129.6	116.9	106.8	98.5	91.6	85.8	80.8	76.5	72.7	69.3	66.4	63.7	61.3	59.1	57.2	55.4	53.7	52.2	50.8	49.5	48.3	47.2	46.1	45.2	44.2	43.4	42.6	2000
2100	206.7	175.1	152.4	135.4	122.2	111.7	103.0	95.8	89.7	84.5	80.0	76.0	72.5	69.4	66.6	64.1	61.9	59.8	57.9	56.2	54.6	53.2	51.8	50.5	49.4	48.3	47.3	46.3	45.4	44.6	2100
2200	215.7	182.6	159.0	141.3	127.5	116.5	107.5	100.0	93.6	88.2	83.5	79.3	75.7	72.5	69.6	67.0	64.6	62.4	60.5	58.7	57.0	55.5	54.1	52.8	51.6	50.4	49.4	48.4	47.4	46.5	2200
2300	224.6	190.2	165.6	147.2	132.9	121.4	112.0	104.2	97.6	91.9	87.0	82.7	78.9	75.5	72.5	69.8	67.3	65.1	63.0	61.2	59.5	57.9	56.4	55.0	53.8	52.6	51.5	50.4	49.4	48.5	2300
2400	233.5	197.8	172.2	153.1	138.2	126.3	116.5	108.4	101.5	95.6	90.5	86.0	82.1	78.6	75.4	72.6	70.1	67.7	65.6	63.7	61.9	60.2	58.7	57.3	56.0	54.7	53.6	52.5	51.5	50.5	2400
2500	242.5	205.4	178.8	159.0	143.5	131.1	121.0	112.6	105.4	99.3	94.0	89.4	85.3	81.6	78.4	75.4	72.8	70.4	68.2	66.2	64.3	62.6	61.0	59.5	58.2	56.9	55.7	54.6	53.5	52.5	2500
2600	251.4	212.9	185.4	164.8	148.8	136.0	125.5	116.7	109.3	103.0	97.5	92.7	88.4	84.7	81.3	78.3	75.5	73.0	70.7	68.6	66.7	64.9	63.3	61.8	60.3	59.0	57.8	56.6	55.5	54.5	2600
2700	260.3	220.5	192.1	170.7	154.1	140.8	130.0	120.9	113.3	106.7	101.0	96.0	91.6	87.7	84.2	81.1	78.2	75.7	73.3	71.1	69.1	67.3	65.6	64.0	62.5	61.2	59.9	58.7	57.5	56.5	2700
Term. 2/	19.128	15.940	13.663	11.955	10.627	9.564	8.695	7.970	7.357	6.831	6.376	5.978	5.626	5.313	5.034	4.782	4.554	4.347	4.158	3.985	3.826	3.678	3.542	3.416	3.298	3.188	3.085	2.989	2.898	2.813	Term. 2/
L. H. 3/	.089340	.075767	.066071	.058800	.053144	.048620	.044918	.041833	.039223	.036986	.035047	.033350	.031853	.030522	.029332	.028260	.027290	.026409	.025604	.024867	.024188	.023562	.022981	.022443	.021941	.021473	.021035	.020625	.020239	.019876	L. H. 3/

1/ Based on a tare weight of 22.5 tons and a ratio of empty car miles to loaded car miles of 0.351. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.21.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.56.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.70.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 71 (Concluded).—TERRITORY NO. 11 - TOTAL WESTERN, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	10
20	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	20
30	3.3	3.2	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	30
40	3.5	3.4	3.3	3.3	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	40
50	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	50
60	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	60
70	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	70
80	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	80
90	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	90
100	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	2.9	100
120	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	120
140	5.5	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	140
160	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	160
180	6.2	6.1	6.0	5.9	5.8	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.1	180
200	6.6	6.5	6.4	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	200
220	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	220
240	7.4	7.3	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	5.0	4.9	240
260	7.8	7.7	7.5	7.4	7.2	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.4	5.3	5.3	5.2	260
280	8.2	8.0	7.9	7.7	7.6	7.5	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.7	5.6	5.6	5.5	5.5	280
300	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.8	300
320	9.0	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.4	6.3	6.2	6.2	6.1	6.1	320
340	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.3	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	6.3	340
360	9.8	9.6	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	6.9	6.9	6.8	6.8	6.7	6.6	360
380	10.2	10.0	9.8	9.6	9.4	9.3	9.1	9.0	8.8	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	7.0	6.9	380
400	10.5	10.3	10.1	10.0	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.3	7.2	400
420	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.6	7.5	7.4	420
440	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.0	7.9	7.8	7.8	440
460	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.7	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	8.1	460
480	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.6	10.4	10.3	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.6	8.5	8.4	8.3	480
500	12.5	12.3	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.3	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	8.8	8.7	8.6	500
600	14.5	14.2	13.9	13.7	13.5	13.2	13.0	12.8	12.6	12.5	12.3	12.1	12.0	11.8	11.7	11.5	11.4	11.3	11.2	11.0	10.9	10.8	10.7	10.6	10.5	10.4	10.3	10.2	10.1	10.1	600
700	16.4	16.1	15.8	15.5	15.3	15.0	14.8	14.6	14.4	14.2	14.0	13.8	13.6	13.5	13.3	13.1	13.0	12.9	12.7	12.6	12.5	12.3	12.2	12.1	12.0	11.9	11.8	11.7	11.6	11.5	700
800	18.4	18.0	17.7	17.4	17.1	16.9	16.6	16.4	16.1	15.9	15.7	15.5	15.3	15.1	14.9	14.7	14.6	14.4	14.3	14.1	14.0	13.8	13.7	13.6	13.5	13.3	13.2	13.1	13.0	12.9	800
900	20.3	19.9	19.6	19.3	19.0	18.7	18.4	18.1	17.9	17.6	17.4	17.2	16.9	16.7	16.5	16.4	16.2	16.0	15.8	15.7	15.5	15.4	15.2	15.1	14.9	14.8	14.7	14.6	14.4	14.3	900
1000	22.3	21.9	21.5	21.1	20.8	20.5	20.2	19.9	19.6	19.3	19.1	18.8	18.6	18.4	18.2	18.0	17.8	17.6	17.4	17.2	17.0	16.9	16.7	16.6	16.4	16.3	16.1	16.0	15.9	15.8	1000
1100	24.2	23.8	23.4	23.0	22.6	22.3	21.9	21.6	21.3	21.0	20.8	20.5	20.3	20.0	19.8	19.6	19.3	19.1	18.9	18.8	18.6	18.4	18.2	18.1	17.9	17.7	17.6	17.5	17.3	17.2	1100
1200	26.2	25.7	25.3	24.9	24.5	24.1	23.7	23.4	23.1	22.8	22.5	22.2	21.9	21.7	21.4	21.2	20.9	20.7	20.5	20.3	20.1	19.9	19.7	19.6	19.4	19.2	19.1	18.9	18.8	18.6	1200
1300	28.1	27.6	27.2	26.7	26.3	25.9	25.5	25.2	24.8	24.5	24.2	23.9	23.6	23.3	23.0	22.8	22.5	22.3	22.1	21.8	21.6	21.4	21.2	21.0	20.9	20.7	20.5	20.4	20.2	20.0	1300
1400	30.1	29.6	29.1	28.6	28.1	27.7	27.3	26.9	26.5	26.2	25.9	25.5	25.2	24.9	24.6	24.4	24.1	23.9	23.6	23.4	23.2	22.9	22.7	22.5	22.3	22.2	22.0	21.8	21.6	21.5	1400
1500	32.0	31.5	30.9	30.4	30.0	29.5	29.1	28.7	28.3	27.9	27.5	27.2	26.9	26.6	26.3	26.0	25.7	25.4	25.2	24.9	24.7	24.5	24.2	24.0	23.8	23.6	23.4	23.2	23.1	22.9	1500
1600	34.0	33.4	32.8	32.3	31.8	31.3	30.9	30.4	30.0	29.6	29.2	28.9	28.5	28.2	27.9	27.6	27.3	27.0	26.7	26.5	26.2	26.0	25.7	25.5	25.3	25.1	24.9	24.7	24.5	24.3	1600
1700	35.9	35.3	34.7	34.2	33.6	33.1	32.6	32.2	31.8	31.3	30.9	30.6	30.2	29.8	29.5	29.2	28.9	28.6	28.3	28.0	27.8	27.5	27.3	27.0	26.8	26.6	26.3	26.1	25.9	25.7	1700
1800	37.9	37.2	36.6	36.0	35.5	34.9	34.4	33.9	33.5	33.1	32.6	32.2	31.9	31.5	31.1	30.8	30.5	30.2	29.9	29.6	29.3	29.0	28.8	28.5	28.3	28.0	27.8	27.6	27.4	27.2	1800
1900	39.8	39.2	38.5	37.9	37.3	36.7	36.2	35.7	35.2	34.8	34.3	33.9	33.5	33.1	32.8	32.4	32.1	31.7	31.4	31.1	30.8	30.5	30.3	30.0	29.7	29.5	29.3	29.0	28.8	28.6	1900
2000	41.8	41.1	40.4	39.7	39.1	38.6	38.0	37.5	37.0	36.5	36.0	35.6	35.2	34.8	34.4	34.0	33.6	33.3	33.0	32.7	32.3	32.1	31.8	31.5	31.2	31.0	30.7	30.5	30.2	30.0	2000
2100	43.8	43.0	42.3	41.6	41.0	40.4	39.8	39.2	38.7	38.2	37.7	37.3	36.8	36.4	36.0	35.6	35.2	34.9	34.5	34.2	33.9	33.6	33.3	33.0	32.7	32.4	32.2	31.9	31.7	31.4	2100
2200	45.7	44.9	44.2	43.5	42.8	42.2	41.6	41.0	40.4	39.9	39.4	38.9	38.5	38.0	37.6	37.2	36.8	36.4	36.1	35.7	35.4	35.1	34.8	34.5	34.2	33.9	33.6	33.4	33.1	32.9	2200
2300	47.7	46.8	46.1	45.3	44.6	44.0	43.3	42.7	42.2	41.6	41.1	40.6	40.1	39.7	39.2	38.8	38.4	38.0	37.6	37.3	36.9	36.6	36.3	36.0	35.7	35.4	35.1	34.8	34.6	34.3	2300
2400	49.6	48.8	48.0	47.2	46.5	45.8	45.1	44.5	43.9	43.3	42.8	42.3	41.8	41.3	40.9	40.4	40.0	39.6	39.2	38.8	38.5	38.1	37.8	37.5	37.1	36.8	36.5	36.3	36.0	35.7	2400
2500	51.6	50.7	49.8	49.1	48.3	47.6	46.9	46.3	45.6	45.1	44.5	44.0	43.4	43.0	42.5	42.0	41.6	41.2	40.8	40.4	40.0	39.6	39.3	39.0	38.6	38.3	38.0	37.7	37.4	37.2	2500
2600	53.5	52.6	51.7	50.9	50.1	49.4	48.7	48.0	47.4	46.8	46.2	45.6	45.1	44.6	44.1	43.6	43.2	42.7	42.3	41.9	41.5	41.2	40.8	40.4	40.1	39.8	39.5	39.2	38.9	38.6	2600
2700	55.5	54.5	53.6	52.8	52.0	51.2	50.5	49.8	49.1	48.5	47.9	47.3	46.8	46.2	45.7	45.2	44.8	44.3	43.9	43.5	43.1	42.7	42.3	41.9	41.6	41.2	40.9	40.6	40.3	40.0	2700
Term. 2/	2,733	2.657	2.585	2.517	2.452	2.391	2.333	2.277	2.224	2.174	2.125	2.079	2.035	1.993	1.952	1.913	1.875	1.839	1.805	1.771	1.739	1.708	1.678	1.649	1.621	1.594	1.568	1.543	1.518	1.494	Term. 2/
L. H. 3/	.019534	.019221	.018905	.018616	.018341	.018080	.017832	.017595	.017370	.017155	.016949	.016752	.016564	.016383	.016210	.016044	.015884	.015731	.015583	.015441	.015304	.015171	.015044	.014921	.014802	.014687	.014575	.014468	.014363	.014263	L. H. 3/

1/ Based on a tare weight of 22.5 tons and a ratio of empty car miles to loaded car miles of 0.351. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.21.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.56.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.70.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 11 - Total Western, incl. Southwestern, West. Trunk Line, Mt. Pac., No. Illinois and Sou. Missouri

FLAT CARS

TABLE 72.—TERRITORY NO. 11 - TOTAL WESTERN, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																														Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.1	16.8	14.4	12.6	11.2	10.1	9.2	8.4	7.8	7.2	6.8	6.3	6.0	5.6	5.3	5.1	4.8	4.6	4.4	4.3	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	10
20	21.1	17.6	15.1	13.2	11.8	10.6	9.7	8.9	8.2	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	20
30	22.1	18.4	15.8	13.9	12.4	11.2	10.2	9.3	8.6	8.0	7.5	7.1	6.7	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.6	3.5	3.4	30
40	23.0	19.3	16.5	14.5	12.9	11.7	10.6	9.8	9.1	8.4	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	3.7	40
50	24.0	20.1	17.3	15.2	13.5	12.2	11.1	10.2	9.5	8.8	8.3	7.8	7.3	7.0	6.6	6.3	6.0	5.8	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9	50
60	25.0	20.9	18.0	15.8	14.1	12.7	11.6	10.7	9.9	9.2	8.6	8.1	7.7	7.3	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	4.1	60
70	26.0	21.7	18.7	16.4	14.7	13.3	12.2	11.1	10.3	9.6	9.0	8.5	8.0	7.6	7.2	6.9	6.6	6.3	6.1	5.9	5.6	5.4	5.3	5.1	4.9	4.8	4.7	4.5	4.4	4.3	70
80	27.0	22.6	19.4	17.1	15.3	13.8	12.6	11.6	10.8	10.0	9.4	8.9	8.4	7.9	7.6	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.7	4.6	4.5	80
90	27.9	23.4	20.2	17.7	15.8	14.3	13.1	12.1	11.2	10.4	9.8	9.2	8.7	8.3	7.9	7.5	7.2	6.9	6.6	6.4	6.2	5.9	5.8	5.6	5.4	5.2	5.1	5.0	4.8	4.7	90
100	28.9	24.2	20.9	18.4	16.4	14.9	13.6	12.5	11.6	10.8	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.5	5.3	5.2	5.1	4.9	100
120	30.9	25.9	22.3	19.7	17.6	15.9	14.6	13.4	12.5	11.6	10.9	10.3	9.7	9.3	8.8	8.4	8.1	7.7	7.5	7.2	6.9	6.7	6.5	6.3	6.1	5.9	5.8	5.6	5.5	5.3	120
140	32.8	27.5	23.8	20.9	18.7	17.0	15.5	14.3	13.3	12.4	11.7	11.0	10.4	9.9	9.5	9.0	8.7	8.3	8.0	7.7	7.5	7.2	7.0	6.8	6.6	6.4	6.2	6.1	5.9	5.8	140
160	34.8	29.2	25.2	22.2	19.9	18.0	16.5	15.2	14.2	13.2	12.4	11.7	11.1	10.6	10.1	9.6	9.2	8.9	8.6	8.2	8.0	7.7	7.5	7.3	7.0	6.9	6.7	6.5	6.3	6.2	160
180	36.7	30.9	26.7	23.5	21.0	19.1	17.5	16.1	15.0	14.0	13.2	12.5	11.8	11.2	10.7	10.3	9.8	9.5	9.1	8.8	8.5	8.2	8.0	7.7	7.5	7.3	7.1	6.9	6.8	6.6	180
200	38.7	32.5	28.1	24.8	22.2	20.1	18.5	17.0	15.9	14.8	14.0	13.2	12.5	11.9	11.3	10.9	10.4	10.0	9.7	9.3	9.0	8.7	8.5	8.2	8.0	7.8	7.6	7.4	7.2	7.0	200
220	40.7	34.2	29.5	26.1	23.4	21.2	19.4	18.0	16.7	15.6	14.7	13.9	13.2	12.5	12.0	11.5	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.7	8.4	8.2	8.0	7.8	7.6	7.5	220
240	42.6	35.8	31.0	27.3	24.5	22.3	20.4	18.9	17.6	16.4	15.5	14.6	13.9	13.2	12.6	12.1	11.6	11.2	10.7	10.4	10.0	9.7	9.4	9.2	8.9	8.7	8.5	8.3	8.1	7.9	240
260	44.6	37.5	32.4	28.6	25.7	23.3	21.4	19.8	18.4	17.2	16.2	15.3	14.6	13.9	13.2	12.7	12.2	11.7	11.3	10.9	10.6	10.2	9.9	9.6	9.4	9.1	8.9	8.7	8.5	8.3	260
280	46.5	39.1	33.9	29.9	26.8	24.4	22.4	20.7	19.3	18.0	17.0	16.1	15.2	14.5	13.9	13.3	12.8	12.3	11.8	11.4	11.1	10.7	10.4	10.1	9.9	9.6	9.4	9.1	8.9	8.7	280
300	48.5	40.8	35.3	31.2	28.0	25.4	23.3	21.6	20.1	18.8	17.7	16.8	15.9	15.2	14.5	13.9	13.4	12.9	12.4	12.0	11.6	11.2	10.9	10.6	10.3	10.1	9.8	9.6	9.4	9.2	300
320	50.4	42.5	36.8	32.5	29.2	26.5	24.3	22.5	21.0	19.6	18.5	17.5	16.6	15.8	15.1	14.5	13.9	13.4	12.9	12.5	12.1	11.7	11.4	11.1	10.8	10.5	10.3	10.0	9.8	9.6	320
340	52.4	44.1	38.2	33.8	30.3	27.5	25.3	23.4	21.8	20.4	19.3	18.2	17.3	16.5	15.8	15.1	14.5	14.0	13.5	13.0	12.6	12.2	11.9	11.6	11.3	11.0	10.7	10.5	10.2	10.0	340
360	54.4	45.8	39.6	35.0	31.5	28.6	26.3	24.3	22.7	21.2	20.0	18.9	18.0	17.2	16.4	15.7	15.1	14.6	14.0	13.6	13.1	12.8	12.4	12.0	11.7	11.4	11.2	10.9	10.6	10.4	360
380	56.3	47.4	41.1	36.3	32.6	29.7	27.2	25.2	23.5	22.0	20.8	19.7	18.7	17.8	17.0	16.3	15.7	15.1	14.6	14.1	13.7	13.3	12.9	12.5	12.2	11.9	11.6	11.3	11.1	10.8	380
400	58.3	49.1	42.5	37.6	33.8	30.7	28.2	26.1	24.4	22.8	21.5	20.4	19.4	18.5	17.7	16.9	16.3	15.7	15.1	14.6	14.2	13.8	13.4	13.0	12.7	12.3	12.1	11.8	11.5	11.3	400
420	60.2	50.8	44.0	38.9	34.9	31.8	29.2	27.0	25.2	23.6	22.3	21.1	20.1	19.1	18.3	17.5	16.9	16.3	15.7	15.2	14.7	14.3	13.9	13.5	13.1	12.8	12.5	12.2	11.9	11.7	420
440	62.2	52.4	45.4	40.2	36.1	32.8	30.2	27.9	26.1	24.4	23.0	21.8	20.7	19.8	18.9	18.2	17.5	16.8	16.2	15.7	15.2	14.8	14.3	14.0	13.6	13.3	12.9	12.7	12.4	12.1	440
460	64.2	54.1	46.9	41.5	37.3	33.9	31.1	28.9	26.9	25.2	23.8	22.5	21.4	20.4	19.6	18.8	18.0	17.4	16.8	16.2	15.7	15.3	14.8	14.4	14.1	13.7	13.4	13.1	12.8	12.5	460
480	66.1	55.7	48.3	42.7	38.4	35.0	32.1	29.8	27.8	26.0	24.6	23.3	22.1	21.1	20.2	19.4	18.6	18.0	17.3	16.8	16.3	15.8	15.3	14.9	14.5	14.2	13.8	13.5	13.2	13.0	480
500	68.1	57.4	49.7	44.0	39.6	36.0	33.1	30.7	28.6	26.8	25.3	24.0	22.8	21.8	20.8	20.0	19.2	18.5	17.9	17.3	16.8	16.3	15.8	15.4	15.0	14.6	14.3	14.0	13.7	13.4	500
600	77.9	65.7	57.0	50.4	45.4	41.3	38.0	35.2	32.9	30.9	29.1	27.6	26.2	25.0	24.0	23.0	22.1	21.4	20.6	20.0	19.4	18.8	18.3	17.8	17.3	16.9	16.5	16.2	15.8	15.5	600
700	87.6	74.0	64.2	56.9	51.1	46.6	42.9	39.7	37.1	34.9	32.9	31.2	29.7	28.3	27.1	26.1	25.1	24.2	23.4	22.6	22.0	21.3	20.7	20.2	19.7	19.2	18.8	18.4	18.0	17.6	700
800	97.4	82.2	71.4	63.3	56.9	51.9	47.7	44.3	41.4	38.9	36.7	34.8	33.1	31.6	30.3	29.1	28.0	27.0	26.1	25.3	24.5	23.8	23.2	22.6	22.0	21.5	21.0	20.6	20.1	19.7	800
900	107.2	90.5	78.6	69.7	62.7	57.2	52.6	48.8	45.6	42.9	40.5	38.4	36.6	34.9	33.5	32.1	30.9	29.9	28.9	28.0	27.1	26.4	25.6	25.0	24.4	23.8	23.3	22.8	22.3	21.8	900
1000	117.0	98.8	85.8	76.1	68.5	62.5	57.5	53.4	49.9	46.9	44.3	42.0	40.0	38.2	36.6	35.2	33.9	32.7	31.6	30.6	29.7	28.9	28.1	27.4	26.7	26.1	25.5	24.9	24.4	23.9	1000
1100	126.8	107.1	93.1	82.5	74.3	67.7	62.4	57.9	54.1	50.9	48.1	45.6	43.4	41.5	39.8	38.2	36.8	35.5	34.4	33.3	32.3	31.4	30.6	29.8	29.1	28.4	27.7	27.1	26.6	26.1	1100
1200	136.6	115.4	100.3	88.9	80.1	73.0	67.3	62.4	58.4	54.9	51.8	49.2	46.9	44.8	42.9	41.3	39.7	38.4	37.1	36.0	34.9	33.9	33.0	32.2	31.4	30.7	30.0	29.3	28.7	28.2	1200
1300	146.4	123.7	107.6	95.3	85.9	78.3	72.1	67.0	62.6	58.9	55.6	52.8	50.3	48.1	46.1	44.3	42.7	41.2	39.9	38.6	37.5	36.4	35.5	34.6	33.7	33.0	32.2	31.5	30.9	30.3	1300
1400	156.2	132.0	114.7	101.7	91.7	83.6	77.0	71.5	66.9	62.9	59.4	56.4	53.7	51.4	49.2	47.3	45.6	44.0	42.6	41.3	40.1	39.0	37.9	37.0	36.1	35.2	34.5	33.7	33.0	32.4	1400
1500	165.9	140.3	121.9	108.2	97.5	88.9	81.9	76.1	71.1	66.9	63.2	60.0	57.2	54.7	52.4	50.4	48.5	46.9	45.3	44.0	42.7	41.5	40.4	39.4	38.4	37.5	36.7	35.9	35.2	34.5	1500
1600	175.7	148.6	129.1	114.6	103.2	94.2	86.8	80.6	75.4	70.9	67.0	63.6	60.6	57.9	55.6	53.4	51.5	49.7	48.1	46.6	45.3	44.0	42.8	41.8	40.8	39.8	38.9	38.1	37.4	36.6	1600
1700	185.5	156.8	136.4	121.0	109.0	99.5	91.7	85.1	79.6	74.9	70.8	67.2	64.0	61.2	58.7	56.5	54.4	52.5	50.8	49.3	47.8	46.5	45.3	44.2	43.1	42.1	41.2	40.3	39.5	38.7	1700
1800	195.3	165.1	143.6	127.4	114.8	104.8	96.5	89.7	83.9	78.9	74.6	70.8	67.5	64.5	61.9	59.5	57.3	55.4	53.6	51.9	50.4	49.0	47.8	46.6	45.4	44.4	43.4	42.5	41.7	40.9	1800
1900	205.1	173.4	150.8	133.8	120.6	110.1	101.4	94.2	88.1	82.9	78.4	74.4	70.9	67.8	65.0	62.5	60.3	58.2	56.3	54.6	53.0	51.6	50.2	49.0	47.8	46.7	45.7	44.7	43.8	43.0	1900
2000	214.9	181.7	158.0	140.2	126.4	115.3	106.3	98.8	92.4	86.9	82.2	78.0	74.4	71.1	68.2	65.6	63.2	61.0	59.1	57.3	55.6	54.1	52.7	51.4	50.1	49.0	47.9	46.9	46.0	45.1	2000
2100	224.7	190.0	165.2	146.6	132.2	120.6	111.2	103.3	96.6	90.9	86.0	81.6	77.8	74.4	71.3	68.6	66.1	63.9	61.8	59.9	58.2	56.6	55.1	53.7	52.5	51.3	50.2	49.1	48.1	47.2	2100
2200	234.5	198.3	172.4	153.1	138.0	125.9	116.1	107.8	100.9	94.9	89.7	85.2	81.2	77.7	74.5	71.7	69.1	66.7	64.6	62.6	60.8	59.1	57.6	56.1	54.8	53.6	52.4	51.3	50.3	49.3	2200
2300	244.3	206.6	179.7	159.5	143.8	131.2	120.9	112.4	105.1	98.9	93.5	88.8	84.7	81.0	77.7	74.7	72.0	69.6	67.3	65.3	63.4	61.6	60.0	58.5	57.2	55.9	54.6	53.5	52.4	51.4	2300
2400	254.0	214.9	186.9	165.9	149.6	136.5	125.8	116.9	109.4	102.9	97.3	92.4	88.1	84.3	80.8	77.7	74.9	72.4	70.1	67.9	66.0	64.2	62.5	60.9	59.5	58.1	56.9	55.7	54.6	53.5	2400
2500	263.8	223.1	194.1	172.3	155.3	141.8	130.7	121.5	113.6	106.9	101.1	96.0	91.5	87.5	84.0	80.8	77.9	75.2	72.8	70.6	68.6	66.7	64.9	63.3	61.8	60.4	59.1	57.9	56.7	55.6	2500
2600	273.6	231.4	201.3	178.7	161.1	147.1	135.6	126.0	117.9	110.9	104.9	99.6	95.0	90.8	87.1	83.8	80.8	78.1	75.6	73.3	71.2	69.2	67.4	65.7	64.2	62.7	61.4	60.1	58.9	57.8	2600
2700	283.4	239.7	208.5	185.1	166.9	152.4	140.5	130.5	122.1	114.9	108.7	103.2	98.4	94.1	90.3	86.8	83.7	80.9	78.3	75.9	73.7	71.7	69.9	68.1	66.5	65.0	63.6	62.3	61.0	59.9	2700
Term. 2/	19.128	15.940	13.663	11.955	10.627	9.564	8.695	7.970	7.357	6.831	6.376	5.978	5.626	5.313	5.034	4.782	4.554	4.347	4.158	3.985	3.826	3.678	3.542	3.416	3.298	3.188	3.085	2.989	2.898	2.813	Term. 2/
L. H. 3/	.097880	.082883	.072171	.064138	.057689	.052890	.048800	.045392	.042508	.040036	.037893	.036019	.034365	.032894	.031579	.030395	.029324	.028350	.027461	.026646	.025896	.025204	.024563	.023968	.023414	.022897	.022413	.021959	.021533	.021132	L. H. 3/

1/ Based on a tare weight of 17.4 tons and a ratio of empty car miles to loaded car miles of 0.723. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.21.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.56.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.70.

Note: The above costs do not include an allowance for loss and damage. See Table 83 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 72 (Concluded).—TERRITORY NO. 11 – TOTAL WESTERN, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri

Territory No. 11 – Total Western, incl. Southwestern, West. Trunk Line, Mt. Pac., No. Illinois and Sou. Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.9	2.9	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	10
20	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	20
30	3.4	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	30
40	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	40
50	3.8	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	50
60	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.4	60
70	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.7	2.6	2.6	2.6	70
80	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.7	2.7	80
90	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	90
100	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	100
120	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	120
140	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	140
160	5.9	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	160
180	6.3	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	180
200	6.7	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.5	200
220	7.3	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	220
240	7.7	7.6	7.4	7.3	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	240
260	8.1	8.0	7.8	7.6	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.4	260
280	8.5	8.4	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.7	5.6	280
300	9.0	8.8	8.6	8.4	8.3	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.3	6.2	6.2	6.1	6.0	6.0	300
320	9.4	9.2	9.0	8.9	8.7	8.5	8.4	8.2	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	6.3	6.3	320
340	9.8	9.6	9.4	9.2	9.1	8.9	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.8	6.7	6.6	6.6	340
360	10.2	10.0	9.8	9.6	9.4	9.3	9.1	9.0	8.8	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.9	360
380	10.6	10.4	10.2	10.0	9.8	9.7	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.2	380
400	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.7	9.6	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.5	7.5	400
420	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	9.9	9.8	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.0	7.9	7.8	7.8	420
440	11.9	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.1	10.0	9.9	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.1	440
460	12.3	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.7	9.6	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.7	8.6	8.5	8.4	8.4	460
480	12.7	12.4	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.2	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.7	480
500	13.1	12.9	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.4	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	9.0	500
600	15.2	14.9	14.6	14.4	14.1	13.9	13.7	13.4	13.2	13.0	12.9	12.7	12.5	12.4	12.2	12.1	11.9	11.8	11.6	11.5	11.4	11.3	11.2	11.0	10.9	10.8	10.7	10.6	10.5	10.5	600
700	17.3	16.9	16.6	16.3	16.1	15.8	15.5	15.3	15.1	14.9	14.7	14.5	14.3	14.1	13.9	13.7	13.6	13.4	13.3	13.1	13.0	12.9	12.7	12.6	12.5	12.4	12.3	12.2	12.0	11.9	700
800	19.3	19.0	18.6	18.3	18.0	17.7	17.4	17.2	16.9	16.7	16.4	16.2	16.0	15.8	15.6	15.4	15.3	15.1	14.9	14.8	14.6	14.5	14.3	14.2	14.0	13.9	13.8	13.7	13.6	13.5	800
900	21.4	21.0	20.6	20.3	19.9	19.6	19.3	19.0	18.8	18.5	18.2	18.0	17.8	17.5	17.3	17.1	16.9	16.7	16.6	16.4	16.2	16.0	15.9	15.7	15.6	15.5	15.3	15.2	15.1	15.0	900
1000	23.5	23.1	22.6	22.3	21.9	21.5	21.2	20.9	20.6	20.3	20.0	19.8	19.5	19.3	19.0	18.8	18.6	18.4	18.2	18.0	17.8	17.6	17.5	17.3	17.1	17.0	16.8	16.7	16.6	16.4	1000
1100	25.6	25.1	24.6	24.2	23.8	23.5	23.1	22.8	22.4	22.1	21.8	21.5	21.3	21.0	20.7	20.5	20.3	20.0	19.8	19.6	19.4	19.2	19.1	18.9	18.7	18.5	18.4	18.2	18.1	17.9	1100
1200	27.6	27.1	26.7	26.2	25.8	25.4	25.0	24.6	24.3	23.9	23.6	23.3	23.0	22.7	22.5	22.2	21.9	21.7	21.5	21.2	21.0	20.8	20.6	20.4	20.3	20.1	19.9	19.7	19.6	19.4	1200
1300	29.7	29.2	28.7	28.2	27.7	27.3	26.9	26.5	26.1	25.7	25.4	25.1	24.7	24.4	24.2	23.9	23.6	23.4	23.1	22.9	22.6	22.4	22.2	22.0	21.8	21.6	21.4	21.2	21.1	20.9	1300
1400	31.8	31.2	30.7	30.2	29.7	29.2	28.8	28.3	27.9	27.5	27.2	26.8	26.5	26.2	25.9	25.6	25.3	25.0	24.7	24.5	24.3	24.0	23.8	23.6	23.4	23.2	23.0	22.8	22.6	22.4	1400
1500	33.9	33.3	32.7	32.1	31.6	31.1	30.6	30.2	29.8	29.4	29.0	28.6	28.2	27.9	27.6	27.3	27.0	26.7	26.4	26.1	25.9	25.6	25.4	25.1	24.9	24.7	24.5	24.3	24.1	23.9	1500
1600	35.9	35.3	34.7	34.1	33.5	33.0	32.5	32.1	31.6	31.2	30.8	30.4	30.0	29.6	29.3	28.9	28.6	28.3	28.0	27.7	27.5	27.2	26.9	26.7	26.5	26.2	26.0	25.8	25.6	25.4	1600
1700	38.0	37.3	36.7	36.1	35.5	34.9	34.4	33.9	33.4	33.0	32.6	32.1	31.7	31.4	31.0	30.6	30.3	30.0	29.7	29.4	29.1	28.8	28.5	28.3	28.0	27.8	27.5	27.3	27.1	26.9	1700
1800	40.1	39.4	38.7	38.0	37.4	36.9	36.3	35.8	35.3	34.8	34.3	33.9	33.5	33.1	32.7	32.3	32.0	31.6	31.3	31.0	30.7	30.4	30.1	29.8	29.6	29.3	29.1	28.8	28.6	28.4	1800
1900	42.2	41.4	40.7	40.0	39.4	38.8	38.2	37.6	37.1	36.6	36.1	35.7	35.2	34.8	34.4	34.0	33.6	33.3	32.9	32.6	32.3	32.0	31.7	31.4	31.1	30.9	30.6	30.3	30.1	29.9	1900
2000	44.2	43.5	42.7	42.0	41.3	40.7	40.1	39.5	39.0	38.4	37.9	37.4	37.0	36.5	36.1	35.7	35.3	34.9	34.6	34.2	33.9	33.6	33.3	33.0	32.7	32.4	32.1	31.9	31.6	31.4	2000
2100	46.3	45.5	44.7	44.0	43.3	42.6	42.0	41.4	40.8	40.2	39.7	39.2	38.7	38.3	37.8	37.4	37.0	36.6	36.2	35.9	35.5	35.2	34.8	34.5	34.2	33.9	33.6	33.4	33.1	32.8	2100
2200	48.4	47.5	46.7	45.9	45.2	44.5	43.9	43.2	42.6	42.0	41.5	41.0	40.5	40.0	39.5	39.1	38.7	38.3	37.9	37.5	37.1	36.8	36.4	36.1	35.8	35.5	35.2	34.9	34.6	34.3	2200
2300	50.5	49.6	48.7	47.9	47.2	46.4	45.7	45.1	44.5	43.9	43.3	42.7	42.2	41.7	41.2	40.8	40.3	39.9	39.5	39.1	38.7	38.4	38.0	37.7	37.3	37.0	36.7	36.4	36.1	35.8	2300
2400	52.5	51.6	50.7	49.9	49.1	48.3	47.6	46.9	46.3	45.7	45.1	44.5	44.0	43.4	42.9	42.5	42.0	41.6	41.1	40.7	40.3	39.9	39.6	39.2	38.9	38.5	38.2	37.9	37.6	[illegible]	2400
2500	54.6	53.6	52.7	51.9	51.0	50.3	49.5	48.8	48.1	47.5	46.9	46.3	45.7	45.2	44.7	44.2	43.7	43.2	42.8	42.3	41.9	41.5	41.2	40.8	40.4	40.1	39.8	39.4	39.1	[illegible]	2500
2600	56.7	55.7	54.7	53.8	53.0	52.2	51.4	50.7	50.0	49.3	48.7	48.0	47.5	46.9	46.4	45.8	45.4	44.9	44.4	44.0	43.5	43.1	42.7	42.4	42.0	41.6	41.3	40.9	40.6	40.3	2600
2700	58.8	57.7	56.7	55.8	54.9	54.1	53.3	52.5	51.8	51.1	50.4	49.8	49.2	48.6	48.1	47.5	47.0	46.5	46.1	45.6	45.2	44.7	44.3	43.9	43.5	43.2	42.8	42.5	42.1	41.8	2700
Term. 2/	2.733	2.657	2.585	2.517	2.452	2.391	2.333	2.277	2.224	2.174	2.125	2.079	2.035	1.993	1.952	1.913	1.875	1.839	1.805	1.771	1.739	1.708	1.678	1.649	1.621	1.594	1.568	1.543	1.518	1.494	Term. 2/
L. H. 3/	.020754	.020397	.020059	.019739	.019436	.019148	.018873	.018612	.018363	.018125	.017898	.017680	.017472	.017273	.017082	.016898	.016722	.016552	.016389	.016231	.016080	.015934	.015793	.015657	.015525	.015398	.015275	.015156	.015041	.014930	L. H. 3/

1/ Based on a tare weight of 17.4 tons and a ratio of empty car miles to loaded car miles of 0.723. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.21.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.56.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.78.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 11 - Total Western, incl. Southwestern, West. Trunk Line, Mt. Pac., No. Illinois and Sou. Missouri

GONDOLA AND HOPPER CARS

TABLE 73.--TERRITORY NO. 11 - TOTAL WESTERN, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.3	16.9	14.5	12.7	11.3	10.2	9.3	8.5	7.8	7.3	6.8	6.4	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	10
20	21.4	17.9	15.3	13.4	12.0	10.8	9.8	9.0	8.3	7.8	7.2	6.8	6.4	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	20
30	22.6	18.9	16.2	14.2	12.6	11.4	10.4	9.5	8.8	8.2	7.7	7.2	6.8	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.8	3.7	3.6	3.5	30
40	23.7	19.8	17.0	14.9	13.3	12.0	11.0	10.1	9.3	8.7	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	40
50	24.9	20.8	17.9	15.7	14.0	12.6	11.5	10.6	9.8	9.1	8.6	8.0	7.6	7.2	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	4.0	50
60	26.0	21.8	18.7	16.4	14.7	13.2	12.1	11.1	10.3	9.6	9.0	8.5	8.0	7.6	7.2	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.5	4.3	4.2	60
70	27.2	22.7	19.6	17.2	15.3	13.9	12.7	11.6	10.8	10.1	9.4	8.9	8.4	7.9	7.6	7.2	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.5	70
80	28.3	23.7	20.4	17.9	16.0	14.5	13.2	12.2	11.3	10.5	9.9	9.3	8.8	8.3	7.9	7.6	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.4	5.2	5.1	5.0	4.8	4.7	80
90	29.5	24.7	21.2	18.7	16.7	15.1	13.8	12.7	11.8	11.0	10.3	9.7	9.2	8.7	8.3	7.9	7.6	7.2	7.0	6.7	6.5	6.2	6.0	5.8	5.7	5.5	5.3	5.2	5.1	4.9	90
100	30.6	25.6	22.1	19.4	17.4	15.7	14.3	13.2	12.3	11.4	10.7	10.1	9.6	9.1	8.6	8.2	7.9	7.6	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.8	5.6	5.4	5.3	5.2	100
120	32.9	27.6	23.8	20.9	18.7	16.9	15.5	14.3	13.2	12.4	11.6	10.9	10.3	9.8	9.4	8.9	8.6	8.2	7.9	7.6	7.3	7.1	6.9	6.7	6.5	6.3	6.1	5.9	5.8	5.6	120
140	35.2	29.5	25.5	22.4	20.1	18.2	16.6	15.3	14.2	13.3	12.5	11.8	11.1	10.6	10.1	9.6	9.2	8.9	8.5	8.2	7.9	7.7	7.4	7.2	7.0	6.8	6.6	6.4	6.3	6.1	140
160	37.5	31.5	27.1	23.9	21.4	19.4	17.7	16.4	15.2	14.2	13.3	12.6	11.9	11.3	10.8	10.3	9.9	9.5	9.1	8.8	8.5	8.2	8.0	7.7	7.5	7.3	7.1	6.9	6.8	6.6	160
180	39.8	33.4	28.8	25.4	22.7	20.6	18.9	17.4	16.2	15.1	14.2	13.4	12.7	12.1	11.5	11.0	10.6	10.1	9.8	9.4	9.1	8.8	8.5	8.3	8.0	7.8	7.6	7.4	7.2	7.1	180
200	42.1	35.3	30.5	26.9	24.1	21.8	20.0	18.5	17.2	16.0	15.1	14.2	13.5	12.8	12.2	11.7	11.2	10.8	10.4	10.0	9.7	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	200
220	44.4	37.3	32.2	28.4	25.4	23.1	21.1	19.5	18.1	17.0	16.0	15.1	14.3	13.6	13.0	12.4	11.9	11.4	11.0	10.6	10.3	9.9	9.6	9.4	9.1	8.8	8.6	8.4	8.2	8.0	220
240	46.7	39.2	33.9	29.9	26.8	24.3	22.3	20.6	19.1	17.9	16.8	15.9	15.1	14.3	13.7	13.1	12.6	12.1	11.6	11.2	10.9	10.5	10.2	9.9	9.6	9.4	9.1	8.9	8.7	8.5	240
260	49.0	41.2	35.6	31.4	28.1	25.5	23.4	21.6	20.1	18.8	17.7	16.7	15.9	15.1	14.4	13.8	13.2	12.7	12.3	11.8	11.4	11.1	10.7	10.4	10.1	9.9	9.6	9.4	9.2	9.0	260
280	51.3	43.1	37.3	32.9	29.5	26.7	24.5	22.7	21.1	19.7	18.6	17.5	16.6	15.8	15.1	14.5	13.9	13.4	12.9	12.4	12.0	11.6	11.3	11.0	10.7	10.4	10.1	9.9	9.6	9.4	280
300	53.6	45.0	38.9	34.4	30.8	28.0	25.6	23.7	22.1	20.7	19.4	18.4	17.4	16.6	15.8	15.2	14.6	14.0	13.5	13.0	12.6	12.2	11.9	11.5	11.2	10.9	10.6	10.4	10.1	9.9	300
320	55.9	47.0	40.6	35.9	32.2	29.2	26.8	24.8	23.0	21.6	20.3	19.2	18.2	17.3	16.6	15.9	15.2	14.7	14.1	13.6	13.2	12.8	12.4	12.1	11.7	11.4	11.1	10.9	10.6	10.4	320
340	58.2	48.9	42.3	37.4	33.5	30.4	27.9	25.8	24.0	22.5	21.2	20.0	19.0	18.1	17.3	16.6	15.9	15.3	14.7	14.2	13.8	13.4	13.0	12.6	12.3	11.9	11.6	11.4	11.1	10.8	340
360	60.5	50.9	44.0	38.9	34.9	31.7	29.0	26.9	25.0	23.4	22.1	20.9	19.8	18.8	18.0	17.3	16.6	15.9	15.4	14.8	14.4	13.9	13.5	13.1	12.8	12.4	12.1	11.8	11.6	11.3	360
380	62.8	52.8	45.7	40.4	36.2	32.9	30.2	27.9	26.0	24.3	22.9	21.7	20.6	19.6	18.7	17.9	17.2	16.6	16.0	15.5	15.0	14.5	14.1	13.7	13.3	13.0	12.6	12.3	12.1	11.8	380
400	65.1	54.7	47.4	41.9	37.6	34.1	31.3	29.0	27.0	25.3	23.8	22.5	21.4	20.4	19.5	18.6	17.9	17.2	16.6	16.1	15.5	15.1	14.6	14.2	13.8	13.5	13.1	12.8	12.5	12.3	400
420	67.4	56.7	49.1	43.3	38.9	35.3	32.4	30.0	28.0	26.2	24.7	23.3	22.2	21.1	20.2	19.3	18.6	17.9	17.2	16.7	16.1	15.6	15.2	14.8	14.4	14.0	13.6	13.3	13.0	12.7	420
440	69.7	58.6	50.7	44.8	40.2	36.6	33.6	31.1	28.9	27.1	25.5	24.2	22.9	21.9	20.9	20.0	19.2	18.5	17.9	17.3	16.7	16.2	15.7	15.3	14.9	14.5	14.2	13.8	13.5	13.2	440
460	72.0	60.6	52.4	46.3	41.6	37.8	34.7	32.1	29.9	28.0	26.4	25.0	23.7	22.6	21.6	20.7	19.9	19.2	18.5	17.9	17.3	16.8	16.3	15.8	15.4	15.0	14.7	14.3	14.0	13.7	460
480	74.3	62.5	54.1	47.8	42.9	39.0	35.8	33.1	30.9	29.0	27.3	25.8	24.5	23.4	22.3	21.4	20.6	19.8	19.1	18.5	17.9	17.3	16.8	16.4	15.9	15.5	15.2	14.8	14.5	14.2	480
500	76.5	64.4	55.8	49.3	44.3	40.2	36.9	34.2	31.9	29.9	28.1	26.6	25.3	24.1	23.1	22.1	21.2	20.4	19.7	19.1	18.5	17.9	17.4	16.9	16.5	16.0	15.7	15.3	14.9	14.6	500
600	85.0	74.2	64.2	56.8	51.0	46.4	42.6	39.4	36.8	34.5	32.5	30.8	29.2	27.9	26.7	25.6	24.6	23.7	22.8	22.1	21.4	20.8	20.2	19.6	19.1	18.6	18.2	17.8	17.4	17.0	600
700	99.5	83.9	72.7	64.3	57.7	52.5	48.3	44.7	41.7	39.1	36.9	34.9	33.2	31.6	30.3	29.0	27.9	26.9	26.0	25.1	24.3	23.6	22.9	22.3	21.7	21.2	20.7	20.2	19.8	19.4	700
800	111.0	93.6	81.1	71.7	64.5	58.7	53.9	50.0	46.6	43.7	41.2	39.0	37.1	35.4	33.9	32.5	31.2	30.1	29.1	28.1	27.3	26.5	25.7	25.0	24.4	23.8	23.2	22.7	22.2	21.7	800
900	122.5	103.3	89.5	79.2	71.2	64.8	59.6	55.2	51.5	48.3	45.6	43.2	41.0	39.2	37.5	36.0	34.6	33.3	32.2	31.1	30.2	29.3	28.5	27.7	27.0	26.3	25.7	25.1	24.6	24.1	900
1000	134.0	113.0	97.9	86.7	77.9	70.9	65.2	60.4	56.4	52.9	50.0	47.3	45.0	42.9	41.1	39.4	37.9	36.6	35.3	34.2	33.1	32.1	31.2	30.4	29.6	28.9	28.2	27.6	27.0	26.4	1000
1100	145.5	122.7	106.4	94.2	84.7	77.1	70.9	65.7	61.3	57.5	54.3	51.4	48.9	46.7	44.7	42.9	41.3	39.8	38.4	37.2	36.0	35.0	34.0	33.1	32.3	31.5	30.7	30.1	29.4	28.8	1100
1200	156.9	132.4	114.8	101.6	91.4	83.2	76.5	70.9	66.2	62.1	58.6	55.6	52.8	50.4	48.3	46.3	44.6	43.0	41.5	40.2	39.0	37.8	36.8	35.8	34.9	34.1	33.3	32.5	31.8	31.2	1200
1300	168.4	142.1	123.2	109.1	98.1	89.3	82.2	76.2	71.1	66.8	63.0	59.7	56.8	54.2	51.9	49.8	47.9	46.2	44.7	43.2	41.9	40.7	39.6	38.5	37.5	36.6	35.8	35.0	34.2	33.5	1300
1400	179.9	151.8	131.7	116.6	104.9	95.5	87.8	81.4	76.0	71.4	67.3	63.8	60.7	58.0	55.5	53.3	51.3	49.4	47.8	46.2	44.8	43.5	42.3	41.2	40.2	39.2	38.3	37.4	36.6	35.9	1400
1500	191.4	161.5	140.1	124.1	111.6	101.6	93.5	86.7	80.9	76.0	71.7	68.0	64.7	61.7	59.1	56.7	54.6	52.7	50.9	49.3	47.8	46.4	45.1	43.9	42.8	41.8	40.8	39.9	39.1	38.3	1500
1600	202.9	171.2	148.5	131.5	118.3	107.8	99.1	91.9	85.8	80.6	76.1	72.1	68.6	65.5	62.7	60.2	57.9	55.9	54.0	52.3	50.7	49.2	47.9	46.6	45.4	44.3	43.3	42.4	41.5	40.6	1600
1700	214.4	180.9	156.9	139.0	125.1	113.9	104.8	97.1	90.7	85.2	80.4	76.2	72.5	69.2	66.3	63.7	61.3	59.1	57.1	55.3	53.6	52.1	50.6	49.3	48.1	46.9	45.8	44.8	43.9	43.0	1700
1800	225.8	190.6	165.4	146.5	131.8	120.0	110.4	102.4	95.6	89.8	84.8	80.4	76.5	73.0	69.9	67.1	64.6	62.3	60.2	58.3	56.5	54.9	53.4	52.0	50.7	49.5	48.4	47.3	46.3	45.3	1800
1900	237.3	200.3	173.8	154.0	138.5	126.2	116.1	107.6	100.5	94.4	89.1	84.5	80.4	76.8	73.5	70.6	67.9	65.5	63.3	61.3	59.5	57.8	56.2	54.7	53.3	52.1	50.9	49.7	48.7	47.7	1900
2000	248.8	210.0	182.2	161.4	145.2	132.3	121.7	112.9	105.4	99.0	93.5	88.6	84.3	80.5	77.1	74.1	71.4	68.8	66.5	64.3	62.4	60.6	59.0	57.4	56.0	54.6	53.4	52.2	51.1	50.1	2000
2100	260.3	219.7	190.7	168.9	152.0	138.4	127.4	118.1	110.3	103.6	97.8	92.7	88.3	84.3	80.7	77.5	74.6	72.0	69.6	67.4	65.3	63.5	61.7	60.1	58.6	57.2	55.9	54.7	53.5	52.4	2100
2200	271.8	229.4	199.1	176.4	158.7	144.6	133.0	123.4	115.2	108.2	102.2	96.9	92.2	88.0	84.3	81.0	78.0	75.2	72.7	70.4	68.3	66.3	64.5	62.8	61.2	59.8	58.4	57.1	55.9	54.8	2200
2300	283.3	239.1	207.5	183.9	165.4	150.7	138.7	128.6	120.1	112.8	106.5	101.0	96.1	91.8	87.9	84.4	81.3	78.4	75.8	73.4	71.2	69.1	67.2	65.5	63.9	62.4	60.9	59.6	58.3	57.2	2300
2400	294.7	248.8	215.9	191.3	172.2	156.9	144.3	133.9	125.0	117.5	110.9	105.1	100.1	95.6	91.5	87.9	84.6	81.6	78.9	76.4	74.1	72.0	70.0	68.2	66.5	64.9	63.4	62.1	60.7	59.5	2400
2500	306.2	258.5	224.4	198.8	178.9	163.0	150.0	139.1	129.9	122.1	115.2	109.3	104.0	99.3	95.1	91.4	88.0	84.9	82.0	79.4	77.0	74.8	72.8	70.9	69.1	67.5	66.0	64.5	63.2	61.9	2500
2600	317.7	268.2	232.8	206.3	185.6	169.1	155.6	144.4	134.8	126.7	119.6	113.4	107.9	103.1	98.7	94.8	91.3	88.1	85.1	82.5	80.0	77.7	75.6	73.6	71.8	70.1	68.5	67.0	65.6	64.2	2600
2700	329.2	277.9	241.2	213.7	192.4	175.3	161.3	149.6	139.7	131.3	124.0	117.5	111.9	106.8	102.3	98.3	94.6	91.3	88.3	85.5	82.9	80.5	78.3	76.3	74.4	72.6	71.0	69.4	68.0	66.6	2700
Term. 2/	19.128	15.940	13.663	11.955	10.627	9.564	8.695	7.970	7.357	6.831	6.376	5.978	5.626	5.313	5.034	4.782	4.554	4.347	4.158	3.985	3.826	3.678	3.542	3.416	3.298	3.188	3.085	2.989	2.898	2.813	Term. 2/
L. H. 3/	.114840	.097017	.084286	.074738	.067311	.061370	.056509	.052458	.049031	.046093	.043547	.041319	.039353	.037606	.036042	.034635	.033362	.032205	.031148	.030179	.029288	.028465	.027704	.026996	.026338	.025723	.025148	.024609	.024103	.023626	L. H. 3/

1/ Based on a tare weight of 21.7 tons and a ratio of empty car miles to loaded car miles of 0.812. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.21.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.56.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.70.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 73 (Concluded).—TERRITORY NO. 11 - TOTAL WESTERN, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	3.0	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	10
20	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	20
30	3.4	3.3	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	30
40	3.7	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	40
50	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	50
60	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	60
70	4.4	4.2	4.1	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	70
80	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	80
90	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	90
100	5.1	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	100
120	5.5	5.3	5.3	5.2	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	120
140	6.0	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	140
160	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.1	160
180	6.9	6.8	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	180
200	7.4	7.2	7.1	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	5.0	4.9	4.8	4.8	4.7	200
220	7.8	7.7	7.5	7.4	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.5	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	220
240	8.3	8.1	7.9	7.8	7.6	7.5	7.4	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	5.4	240
260	8.8	8.6	8.4	8.2	8.1	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	260
280	9.2	9.0	8.8	8.7	8.5	8.3	8.2	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.2	6.1	6.0	280
300	9.7	9.5	9.3	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.4	300
320	10.1	9.9	9.7	9.5	9.4	9.2	9.0	8.9	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0		6.9	6.8	6.8	6.7	320
340	10.6	10.4	10.2	10.0	9.8	9.6	9.5	9.3	9.1	9.0	8.9	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4		7.2	7.2	7.1	7.0	340
360	11.1	10.8	10.6	10.4	10.2	10.0	9.9	9.7	9.5	9.4	9.2	9.1	9.0	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7		7.6	7.5	7.4	7.3	360
380	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.0	7.9	7.8	7.7	7.7	380
400	12.0	11.8	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.0	9.9	9.7	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.0	400
420	12.5	12.2	12.0	11.7	11.5	11.3	11.1	10.9	10.8	10.6	10.4	10.3	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.7	8.6	8.5	8.4	8.3	420
440	12.9	12.7	12.4	12.2	12.0	11.7	11.5	11.4	11.2	11.0	10.8	10.7	10.5	10.4	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	440
460	13.4	13.1	12.9	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.3	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.1	9.0	460
480	13.9	13.6	13.3	13.1	12.8	12.6	12.4	12.2	12.0	11.8	11.6	11.5	11.3	11.1	11.0	10.8	10.7	10.6	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	480
500	14.3	14.0	13.8	13.5	13.3	13.0	12.8	12.6	12.4	12.2	12.0	11.8	11.7	11.5	11.4	11.2	11.1	10.9	10.8	10.7	10.6	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	500
600	16.6	16.3	16.0	15.7	15.4	15.2	14.9	14.7	14.4	14.2	14.0	13.8	13.6	13.4	13.2	13.1	12.9	12.7	12.6	12.5	12.3	12.2	12.0	11.9	11.8	11.7	11.6	11.5	11.4	11.2	600
700	19.0	18.6	18.2	17.9	17.6	17.3	17.0	16.7	16.5	16.2	16.0	15.7	15.5	15.3	15.1	14.9	14.7	14.6	14.4	14.2	14.1	13.9	13.8	13.6	13.5	13.4	13.2	13.1	13.0	12.9	700
800	21.3	20.9	20.5	20.1	19.7	19.4	19.1	18.8	18.5	18.2	18.0	17.7	17.5	17.2	17.0	16.8	16.6	16.4	16.2	16.0	15.8	15.7	15.5	15.3	15.2	15.0	14.9	14.8	14.6	14.5	800
900	23.6	23.1	22.7	22.3	21.9	21.5	21.2	20.8	20.5	20.2	19.9	19.7	19.4	19.1	18.9	18.6	18.4	18.2	18.0	17.8	17.6	17.4	17.2	17.1	16.9	16.7	16.6	16.4	16.3	16.1	900
1000	25.9	25.4	24.9	24.5	24.1	23.7	23.3	22.9	22.6	22.2	21.9	21.6	21.3	21.0	20.8	20.5	20.3	20.0	19.8	19.6	19.4	19.2	19.0	18.8	18.6	18.4	18.2	18.1	17.9	17.7	1000
1100	28.2	27.7	27.2	26.7	26.2	25.8	25.4	25.0	24.6	24.2	23.9	23.6	23.2	22.9	22.6	22.4	22.1	21.8	21.6	21.4	21.1	20.9	20.7	20.5	20.3	20.1	19.9	19.7	19.5	19.4	1100
1200	30.5	30.0	29.4	28.9	28.4	27.9	27.5	27.0	26.6	26.2	25.9	25.5	25.2	24.8	24.5	24.2	23.9	23.7	23.4	23.1	22.9	22.6	22.4	22.2	22.0	21.8	21.6	21.4	21.2	21.0	1200
1300	32.9	32.2	31.6	31.1	30.5	30.0	29.6	29.1	28.7	28.2	27.8	27.5	27.1	26.7	26.4	26.1	25.8	25.5	25.2	24.9	24.6	24.4	24.1	23.9	23.7	23.4	23.2	23.0	22.8	22.6	1300
1400	35.2	34.5	33.9	33.3	32.7	32.2	31.7	31.2	30.7	30.2	29.8	29.4	29.0	28.6	28.3	27.9	27.6	27.3	27.0	26.7	26.4	26.1	25.9	25.6	25.4	25.1	24.9	24.7	24.5	24.3	1400
1500	37.5	36.8	36.1	35.5	34.9	34.3	33.7	33.2	32.7	32.3	31.8	31.4	31.0	30.6	30.2	29.8	29.5	29.1	28.8	28.5	28.2	27.9	27.6	27.3	27.1	26.8	26.6	26.3	26.1	25.9	1500
1600	39.8	39.1	38.3	37.7	37.0	36.4	35.8	35.3	34.8	34.3	33.8	33.3	32.9	32.5	32.1	31.7	31.3	30.9	30.6	30.3	29.9	29.6	29.3	29.0	28.8	28.5	28.2	28.0	27.7	27.5	1600
1700	42.1	41.3	40.6	39.9	39.2	38.5	37.9	37.3	36.8	36.3	35.8	35.3	34.8	34.4	33.9	33.5	33.1	32.8	32.4	32.0	31.7	31.4	31.1	30.8	30.5	30.2	29.9	29.6	29.4	29.1	1700
1800	44.5	43.6	42.8	42.1	41.4	40.7	40.0	39.4	38.8	38.3	37.7	37.2	36.7	36.3	35.8	35.4	35.0	34.6	34.2	33.8	33.5	33.1	32.8	32.5	32.2	31.9	31.6	31.3	31.0	30.8	1800
1900	46.8	45.9	45.1	44.3	43.5	42.8	42.1	41.5	40.9	40.3	39.7	39.2	38.7	38.2	37.7	37.2	36.8	36.4	36.0	35.6	35.2	34.9	34.5	34.2	33.9	33.5	33.2	32.9	32.7	32.4	1900
2000	49.1	48.2	47.3	46.5	45.7	44.9	44.2	43.5	42.9	42.3	41.7	41.1	40.6	40.1	39.6	39.1	38.6	38.2	37.8	37.4	37.0	36.6	36.2	35.9	35.5	35.2	34.9	34.6	34.3	34.0	2000
2100	51.4	50.4	49.5	48.7	47.8	47.1	46.3	45.6	44.9	44.3	43.7	43.1	42.5	42.0	41.5	41.0	40.5	40.0	39.6	39.2	38.7	38.3	38.0	37.6	37.2	36.9	36.6	36.2	35.9	35.6	2100
2200	53.7	52.7	51.8	50.9	50.0	49.2	48.4	47.7	47.0	46.3	45.6	45.0	44.4	43.9	43.3	42.8	42.3	41.8	41.4	40.9	40.5	40.1	39.7	39.3	38.9	38.6	38.2	37.9	37.6	37.3	2200
2300	56.0	55.0	54.0	53.1	52.2	51.3	50.5	49.7	49.0	48.3	47.6	47.0	46.4	45.8	45.2	44.7	44.2	43.7	43.2	42.7	42.3	41.8	41.4	41.0	40.6	40.3	39.9	39.5	39.2	38.9	2300
2400	58.4	57.3	56.2	55.2	54.3	53.4	52.6	51.8	51.0	50.3	49.6	48.9	48.3	47.7	47.1	46.5	46.0	45.5	45.0	44.5	44.0	43.6	43.2	42.7	42.3	41.9	41.6	41.2	40.8	40.5	2400
2500	60.7	59.5	58.5	57.4	56.5	55.6	54.7	53.9	53.1	52.3	51.6	50.9	50.2	49.6	49.0	48.4	47.8	47.3	46.8	46.3	45.8	45.3	44.9	44.4	44.0	43.6	43.2	42.9	42.5	42.1	2500
2600	63.0	61.8	60.7	59.6	58.6	57.7	56.8	55.9	55.1	54.3	53.6	52.8	52.2	51.5	50.9	50.3	49.7	49.1	48.6	48.1	47.6	47.1	46.6	46.2	45.7	45.3	44.9	44.5	44.1	43.8	2600
2700	65.3	64.1	62.9	61.8	60.8	59.8	58.9	58.0	57.1	56.3	55.5	54.8	54.1	53.4	52.7	52.1	51.5	50.9	50.4	49.8	49.3	48.8	48.3	47.9	47.4	47.0	46.6	46.2	45.8	45.4	2700
Term. 2/	2.733	2.657	2.585	2.517	2.452	2.391	2.333	2.277	2.224	2.174	2.125	2.079	2.035	1.993	1.952	1.913	1.875	1.839	1.805	1.771	1.739	1.708	1.678	1.649	1.621	1.594	1.568	1.543	1.518	1.494	Term. 2/
L. H. 3/	.023177	.022753	.022351	.021971	.021610	.021268	.020941	.020631	.020335	.020052	.019782	.019524	.019277	.019040	.018812	.018594	.018384	.018183	.017989	.017802	.017622	.017448	.017281	.017119	.016963	.016812	.016666	.016524	.016387	.016255	L. H. 3/

1/ Based on a tare weight of 21.7 tons and a ratio of empty car miles to loaded car miles of 0.812. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.21.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.56.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.70.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 11 - Total Western, Incl. Southwestern, West. Trunk Line, Mt. Pac., No. Illinois and Sou. Missouri

TANK CARS

TABLE 74.—TERRITORY NO. 11 - TOTAL WESTERN, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rent and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.6	14.7	12.6	11.1	9.8	8.9	8.1	7.4	6.8	6.4	5.9	5.6	5.2	5.0	4.7	4.5	4.3	4.1	3.9	3.7	3.6	3.5	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.7	10
20	19.0	15.9	13.6	11.9	10.6	9.6	8.7	8.0	7.4	6.9	6.4	6.1	5.7	5.4	5.1	4.9	4.6	4.4	4.3	4.1	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	20
30	20.4	17.0	14.6	12.8	11.4	10.3	9.4	8.6	8.0	7.4	7.0	6.5	6.2	5.8	5.5	5.3	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2	30
40	21.7	18.2	15.6	13.7	12.2	11.0	10.1	9.2	8.6	8.0	7.5	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.5	40
50	23.1	19.3	16.6	14.6	13.0	11.8	10.7	9.9	9.1	8.5	8.0	7.5	7.1	6.7	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	3.9	3.8	3.7	50
60	24.5	20.5	17.6	15.5	13.8	12.5	11.4	10.5	9.7	9.0	8.5	8.0	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	4.0	60
70	25.8	21.6	18.6	16.4	14.6	13.2	12.1	11.1	10.3	9.6	9.0	8.5	8.0	7.6	7.2	6.9	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.4	4.3	70
80	27.2	22.8	19.6	17.2	15.4	13.9	12.7	11.7	10.9	10.1	9.5	8.9	8.5	8.0	7.6	7.3	7.0	6.7	6.4	6.2	5.9	5.7	5.6	5.4	5.2	5.1	4.9	4.8	4.7	4.5	80
90	28.6	23.9	20.6	18.1	16.2	14.6	13.4	12.3	11.4	10.7	10.0	9.4	8.9	8.5	8.0	7.7	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	90
100	29.9	25.1	21.6	19.0	17.0	15.4	14.0	12.9	12.0	11.2	10.5	9.9	9.4	8.9	8.5	8.1	7.7	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.8	5.7	5.5	5.3	5.2	5.1	100
120	32.7	27.4	23.6	20.8	18.6	16.8	15.4	14.2	13.2	12.3	11.5	10.9	10.3	9.8	9.3	8.9	8.5	8.2	7.8	7.6	7.3	7.1	6.8	6.6	6.4	6.2	6.1	5.9	5.8	5.6	120
140	35.4	29.7	25.6	22.5	20.2	18.3	16.7	15.4	14.3	13.4	12.5	11.8	11.2	10.6	10.1	9.7	9.3	8.9	8.6	8.3	8.0	7.7	7.5	7.2	7.0	6.8	6.6	6.5	6.3	6.2	140
160	38.1	32.0	27.6	24.3	21.8	19.7	18.0	16.6	15.5	14.4	13.6	12.8	12.1	11.5	11.0	10.5	10.0	9.6	9.3	8.9	8.6	8.4	8.1	7.9	7.6	7.4	7.2	7.0	6.9	6.7	160
180	40.9	34.3	29.6	26.1	23.3	21.2	19.4	17.9	16.6	15.5	14.6	13.8	13.0	12.4	11.8	11.3	10.8	10.4	10.0	9.6	9.3	9.0	8.7	8.5	8.2	8.0	7.8	7.6	7.4	7.2	180
200	43.6	36.6	31.6	27.9	24.9	22.6	20.7	19.1	17.7	16.6	15.6	14.7	13.9	13.3	12.6	12.1	11.6	11.1	10.7	10.3	10.0	9.7	9.4	9.1	8.8	8.6	8.4	8.1	7.9	7.8	200
220	46.3	38.9	33.6	29.6	26.5	24.0	22.0	20.3	18.9	17.7	16.6	15.7	14.9	14.1	13.5	12.9	12.4	11.9	11.4	11.0	10.7	10.3	10.0	9.7	9.4	9.2	8.9	8.7	8.5	8.3	220
240	49.1	41.2	35.6	31.4	28.1	25.5	23.3	21.6	20.0	18.7	17.6	16.6	15.8	15.0	14.3	13.7	13.1	12.6	12.2	11.7	11.3	11.0	10.6	10.3	10.0	9.8	9.5	9.3	9.0	8.8	240
260	51.8	43.5	37.6	33.2	29.7	26.9	24.7	22.8	21.2	19.8	18.6	17.6	16.7	15.9	15.1	14.5	13.9	13.4	12.9	12.4	12.0	11.6	11.3	10.9	10.6	10.3	10.1	9.8	9.6	9.4	260
280	54.5	45.8	39.6	34.9	31.3	28.4	26.0	24.0	22.3	20.9	19.7	18.6	17.6	16.8	16.0	15.3	14.7	14.1	13.6	13.1	12.7	12.3	11.9	11.6	11.2	10.9	10.7	10.4	10.1	9.9	280
300	57.3	48.1	41.6	36.7	32.9	29.8	27.3	25.3	23.5	22.0	20.7	19.5	18.5	17.6	16.8	16.1	15.4	14.8	14.3	13.8	13.4	12.9	12.5	12.2	11.8	11.5	11.2	11.0	10.7	10.4	300
320	60.0	50.4	43.6	38.5	34.5	31.3	28.7	26.5	24.6	23.1	21.7	20.5	19.4	18.5	17.7	16.9	16.2	15.6	15.0	14.5	14.0	13.6	13.2	12.8	12.4	12.1	11.8	11.5	11.2	11.0	320
340	62.7	52.7	45.6	40.2	36.1	32.7	30.0	27.7	25.8	24.1	22.7	21.5	20.4	19.4	18.5	17.7	17.0	16.3	15.7	15.2	14.7	14.2	13.8	13.4	13.0	12.7	12.4	12.1	11.8	11.5	340
360	65.5	55.0	47.6	42.0	37.6	34.2	31.3	28.9	26.9	25.2	23.7	22.4	21.3	20.2	19.3	18.5	17.8	17.1	16.5	15.9	15.4	14.9	14.4	14.0	13.6	13.3	12.9	12.6	12.3	12.1	360
380	68.2	57.3	49.6	43.8	39.2	35.6	32.6	30.2	28.1	26.3	24.7	23.4	22.2	21.1	20.2	19.3	18.5	17.8	17.2	16.6	16.0	15.5	15.1	14.6	14.2	13.9	13.5	13.2	12.9	12.6	380
400	71.0	59.7	51.6	45.5	40.8	37.1	34.0	31.4	29.2	27.4	25.8	24.3	23.1	22.0	21.0	20.1	19.3	18.6	17.9	17.3	16.7	16.2	15.7	15.3	14.8	14.5	14.1	13.8	13.4	13.1	400
420	73.7	62.0	53.6	47.3	42.4	38.5	35.3	32.6	30.4	28.4	26.8	25.3	24.0	22.9	21.8	20.9	20.1	19.3	18.6	18.0	17.4	16.8	16.3	15.9	15.4	15.0	14.7	14.3	14.0	13.7	420
440	76.4	64.3	55.6	49.1	44.0	39.9	36.6	33.9	31.5	29.5	27.8	26.3	24.9	23.7	22.7	21.7	20.8	20.1	19.3	18.7	18.1	17.5	17.0	16.5	16.1	15.6	15.2	14.9	14.5	14.2	440
460	79.2	66.6	57.6	50.8	45.6	41.4	38.0	35.1	32.7	30.6	28.8	27.2	25.8	24.6	23.5	22.5	21.6	20.8	20.1	19.4	18.7	18.2	17.6	17.1	16.7	16.2	15.8	15.4	15.1	14.7	460
480	81.9	68.9	59.6	52.6	47.2	42.8	39.3	36.3	33.8	31.7	29.9	28.2	26.8	25.5	24.3	23.3	22.4	21.5	20.8	20.1	19.4	18.8	18.3	17.7	17.3	16.8	16.4	16.0	15.6	15.3	480
500	84.6	71.2	61.6	54.4	48.8	44.3	40.6	37.6	35.0	32.8	30.8	29.2	27.7	26.4	25.2	24.1	23.2	22.3	21.5	20.8	20.1	19.5	18.9	18.4	17.9	17.4	17.0	16.6	16.2	15.8	500
600	93.3	82.7	71.6	63.2	56.7	51.5	47.3	43.7	40.7	38.1	35.9	34.0	32.3	30.7	29.4	28.1	27.0	26.0	25.1	24.2	23.4	22.7	22.1	21.4	20.9	20.3	19.8	19.4	18.9	18.5	600
700	112.0	94.2	81.5	72.0	64.7	58.7	53.9	49.9	46.5	43.5	41.0	38.8	36.8	35.1	33.5	32.1	30.9	29.7	28.7	27.7	26.8	26.0	25.2	24.5	23.9	2383	22.7	22.2	21.7	21.2	700
800	125.6	105.7	91.5	80.9	72.6	66.0	60.5	56.0	52.2	48.9	46.1	43.6	41.4	39.5	37.7	36.1	34.7	33.4	32.3	31.2	30.2	29.3	28.4	27.6	26.9	26.2	25.6	25.0	24.4	23.9	800
900	139.3	117.3	101.5	89.7	80.5	73.2	67.2	62.2	57.9	54.3	51.2	48.4	46.0	43.8	41.9	40.2	38.6	37.1	35.8	34.6	33.5	32.5	31.6	30.7	29.9	29.1	28.4	27.8	27.1	26.5	900
1000	153.0	128.8	111.5	98.6	88.5	80.4	73.8	68.3	63.7	59.7	56.3	53.2	50.6	48.2	46.1	44.2	42.4	40.9	39.4	38.1	36.9	35.8	34.8	33.8	32.9	32.1	31.3	30.6	29.9	29.2	1000
1100	166.6	140.3	121.5	107.4	96.4	87.7	80.5	74.5	69.4	65.1	61.3	58.0	55.1	52.6	50.3	48.2	46.3	44.6	43.0	41.6	40.3	39.1	37.9	36.9	35.9	35.0	34.2	33.4	32.6	31.9	1100
1200	180.3	151.8	131.5	116.2	104.4	94.8	87.1	80.5	75.2	70.5	66.4	62.9	59.7	56.9	54.4	52.2	50.1	48.3	46.6	45.1	43.6	42.3	41.1	40.0	38.9	37.9	37.0	36.2	35.4	34.6	1200
1300	194.0	163.3	141.5	125.1	112.3	102.1	93.8	86.8	80.9	75.9	71.5	67.7	64.3	61.3	58.6	56.2	54.0	52.0	50.2	48.5	47.0	45.6	44.3	43.1	41.9	40.9	39.9	39.0	38.1	37.3	1300
1400	207.6	174.8	151.5	133.9	120.3	109.3	100.4	93.0	86.7	81.3	76.6	72.5	68.9	65.7	62.8	60.2	57.9	55.7	53.8	52.0	50.4	48.9	47.5	46.2	44.9	43.8	42.8	41.8	40.8	40.0	1400
1500	221.3	186.4	161.4	142.7	128.2	116.6	107.0	99.1	92.4	86.6	81.7	77.3	73.5	70.0	67.0	64.2	61.7	59.4	57.4	55.5	53.7	52.1	50.6	49.3	48.0	46.8	45.6	44.6	43.6	42.6	1500
1600	235.0	197.9	171.4	151.5	136.1	125.8	113.7	105.3	98.1	92.0	86.7	82.1	78.0	74.4	71.1	68.2	65.6	63.2	61.0	59.0	57.1	55.4	53.8	52.3	51.0	49.7	48.5	47.4	46.3	45.3	1600
1700	248.6	209.4	181.4	160.4	144.1	131.0	120.3	111.4	103.9	97.4	91.8	86.9	82.6	78.8	75.3	72.2	69.4	66.9	64.6	62.6	60.5	58.7	57.0	55.4	54.0	52.6	51.4	50.2	49.1	48.0	1700
1800	262.3	220.9	191.4	169.3	152.0	138.3	127.0	117.6	109.6	102.8	96.9	91.7	87.2	83.1	79.5	76.2	73.3	70.6	68.1	65.9	63.8	61.9	60.2	58.5	57.0	55.6	54.2	53.0	51.8	50.7	1800
1900	276.0	232.5	201.4	178.1	160.0	146.5	133.6	123.7	115.4	108.2	102.0	96.6	91.8	87.5	83.7	80.2	77.1	74.3	71.7	69.4	67.2	65.2	63.3	61.6	60.0	58.5	57.1	55.8	54.5	53.4	1900
2000	289.6	244.0	211.4	186.9	167.9	152.7	140.3	129.9	121.1	113.6	107.1	101.4	96.3	91.9	87.9	84.3	81.0	78.0	75.3	72.8	70.6	68.5	66.5	64.7	63.0	61.4	60.0	58.6	57.3	56.1	2000
2100	303.3	255.6	221.4	195.8	175.9	159.9	146.9	136.0	126.9	119.0	112.2	106.2	100.9	96.2	92.0	88.3	84.9	81.7	78.9	76.3	73.9	71.7	69.7	67.8	66.0	64.4	62.8	61.4	60.0	58.8	2100
2200	317.0	267.0	231.4	204.6	183.8	167.2	153.6	142.2	132.6	124.4	117.2	111.0	105.5	100.5	96.2	92.3	88.7	85.5	82.5	79.8	77.3	75.0	72.9	70.9	69.0	67.3	65.7	64.2	62.8	61.4	2200
2300	330.6	278.5	241.4	213.5	191.8	174.4	160.2	148.4	138.3	129.8	122.3	115.8	110.1	105.0	100.4	96.3	92.6	89.2	86.1	83.3	80.7	78.3	76.0	74.0	72.0	70.2	68.6	67.0	65.5	64.1	2300
2400	344.3	290.1	251.3	222.3	199.7	181.6	166.8	154.5	144.1	135.1	127.4	120.6	114.6	109.3	104.6	100.3	96.4	92.9	89.7	86.7	84.0	81.5	79.2	77.1	75.1	73.2	71.4	69.8	68.3	66.8	2400
2500	358.0	301.6	261.3	231.1	207.6	188.9	173.5	160.7	149.8	140.5	132.5	125.4	119.2	113.7	108.8	104.3	100.3	96.6	93.3	90.2	87.4	84.8	82.4	80.1	78.1	76.1	74.3	72.6	71.0	69.5	2500
2600	371.6	313.1	271.3	240.0	215.6	196.1	180.1	166.8	155.6	146.9	137.6	130.3	123.8	118.1	112.9	108.3	104.1	100.3	96.9	93.7	90.8	88.1	85.6	83.2	81.1	79.1	77.2	75.4	73.7	72.2	2600
2700	385.3	324.6	281.3	248.8	223.5	203.3	186.8	173.0	161.3	151.3	142.6	135.1	128.4	122.4	117.1	112.3	108.0	104.0	100.5	97.2	94.1	91.3	88.7	86.3	84.1	82.0	80.0	78.2	76.5	74.9	2700
Term. 2/	16.282	13.568	11.630	10.176	9.046	8.141	7.401	6.784	6.262	5.815	5.427	5.088	4.789	4.523	4.285	4.071	3.877	3.700	3.540	3.392	3.256	3.131	3.015	2.908	2.807	2.714	2.626	2.544	2.467	2.394	Term. 2/
L. H. 3/	.136670	.115208	.099879	.088381	.079439	.072285	.066432	.061554	.057427	.053889	.050823	.048141	.045774	.043669	.041787	.040093	.038560	.037166	.035893	.034727	.033654	.032663	.031746	.030895	.030102	.029362	.028669	.028020	.027411	.026837	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.977. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.21.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.56.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.70.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 74 (Continued).--TERRITORY NO. 11 - TOTAL WESTERN, including Southwestern, Western Trunk Line, Mountain-Pacific, Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20	2.9	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50	3.6	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.6	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100	5.0	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
120	5.5	5.4	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.3	4.2	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
140	6.0	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
160	6.5	6.4	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
180	7.1	6.9	6.8	6.6	6.5	6.4	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
200	7.6	7.4	7.3	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.1	6.1	6.0	5.9	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
220	8.1	7.9	7.8	7.6	7.5	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
240	8.6	8.4	8.3	8.1	7.9	7.8	7.7	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
260	9.2	9.0	8.8	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.5	7.3	7.2	7.1	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
280	9.7	9.5	9.3	9.1	8.9	8.8	8.6	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6	7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
300	10.2	10.0	9.8	9.6	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	8.0	7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
320	10.7	10.5	10.3	10.1	9.9	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
340	11.3	11.0	10.8	10.6	10.4	10.2	10.0	9.8	9.7	9.5	9.4	9.2	9.1	8.9	8.8	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
360	11.8	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.2	9.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
380	12.3	12.1	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.8	9.7	9.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
400	12.8	12.6	12.3	12.1	11.9	11.6	11.4	11.2	11.0	10.9	10.7	10.5	10.4	10.2	10.1	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
420	13.4	13.1	12.8	12.6	12.3	12.1	11.9	11.7	11.5	11.3	11.1	11.0	10.8	10.6	10.5	10.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
440	13.9	13.6	13.3	13.1	12.8	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
460	14.4	14.1	13.8	13.6	13.3	13.1	12.8	12.6	12.4	12.2	12.0	11.8	11.7	11.5	11.3	11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
480	14.9	14.6	14.3	14.1	13.8	13.6	13.3	13.1	12.9	12.7	12.5	12.3	12.1	11.9	11.8	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
500	15.5	15.2	14.9	14.6	14.3	14.0	13.8	13.6	13.3	13.1	12.9	12.7	12.5	12.4	12.2	12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
600	18.1	17.7	17.4	17.0	16.7	16.4	16.1	15.9	15.6	15.4	15.1	14.9	14.7	14.5	14.3	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
700	20.7	20.3	19.9	19.5	19.2	18.8	18.5	18.2	17.9	17.6	17.4	17.1	16.9	16.6	16.4	16.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
800	23.4	22.9	22.4	22.0	21.6	21.2	20.9	20.5	20.2	19.9	19.6	19.3	19.0	18.7	18.5	18.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
900	26.0	25.5	25.0	24.5	24.1	23.6	23.2	22.8	22.5	22.1	21.8	21.5	21.2	20.9	20.6	20.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
1000	28.6	28.0	27.5	27.0	26.5	26.0	25.6	25.2	24.8	24.4	24.0	23.7	23.3	23.0	22.7	22.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
1100	31.3	30.6	30.0	29.5	28.9	28.4	28.0	27.5	27.1	26.6	26.2	25.9	25.5	25.1	24.8	24.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
1200	33.9	33.2	32.6	32.0	31.4	30.8	30.3	29.8	29.3	28.9	28.5	28.0	27.7	27.3	26.9	26.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1300	36.5	35.8	35.1	34.4	33.8	33.2	32.7	32.1	31.6	31.1	30.7	30.2	29.8	29.4	29.0	28.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
1400	39.1	38.4	37.6	36.9	36.3	35.6	35.0	34.5	33.9	33.4	32.9	32.4	32.0	31.5	31.1	30.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1500	41.8	40.9	40.2	39.4	38.7	38.0	37.4	36.8	36.2	35.6	35.1	34.6	34.1	33.7	33.2	32.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
1600	44.4	43.5	42.7	41.9	41.1	40.4	39.8	39.1	38.5	37.9	37.3	36.8	36.3	35.8	35.3	34.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600
1700	47.0	46.1	45.2	44.4	43.6	42.8	42.1	41.4	40.8	40.2	39.6	39.0	38.5	37.9	37.4	36.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1700
1800	49.7	48.7	47.7	46.9	46.0	45.2	44.5	43.8	43.1	42.4	41.8	41.2	40.6	40.1	39.5	39.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800
1900	52.3	51.3	50.3	49.3	48.5	47.6	46.8	46.1	45.4	44.7	44.0	43.4	42.8	42.2	41.6	41.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1900
2000	54.9	53.8	52.8	51.8	50.9	50.0	49.2	48.4	47.6	46.9	46.2	45.6	44.9	44.3	43.7	43.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000
2100	57.5	56.4	55.3	54.3	53.3	52.4	51.6	50.7	49.9	49.2	48.4	47.8	47.1	46.5	45.8	45.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2100
2200	60.2	59.0	57.9	56.8	55.8	54.8	53.9	53.0	52.2	51.4	50.7	49.9	49.2	48.6	47.9	47.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2200
2300	62.8	61.6	60.4	59.3	58.2	57.2	56.3	55.4	54.5	53.7	52.9	52.1	51.4	50.7	50.1	49.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2300
2400	65.4	64.1	62.9	61.8	60.7	59.6	58.6	57.7	56.8	55.9	55.1	54.3	53.6	52.8	52.2	51.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2400
2500	68.1	66.7	65.5	64.2	63.1	62.0	61.0	60.0	59.1	58.2	57.3	56.5	55.7	55.0	54.3	53.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2500
2600	70.7	69.3	68.0	66.7	65.6	64.4	63.4	62.3	61.4	60.4	59.5	58.7	57.9	57.1	56.4	55.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2600
2700	73.3	71.9	70.5	69.2	68.0	66.8	65.7	64.7	63.7	62.7	61.8	60.9	60.0	59.2	58.5	57.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2700
Term. 2/	2.326	2.261	2.200	2.142	2.087	2.035	1.986	1.938	1.893	1.850	1.809	1.770	1.732	1.696	1.661	1.628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.026296	.025785	.025301	.024843	.024409	.023996	.023604	.023230	.022873	.022533	.022208	.021897	.021599	.021314	.021040	.020777	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.977. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.21.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.56.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.70.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 11 - Total Western, incl. Southwestern, West. Trunk Line, Mt. Pac., No. Illinois and Sou. Missouri.

STOCK CARS

TABLE 75.—TERRITORY NO. 11 - TOTAL WESTERN, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	20.3	16.9	14.5	12.7	11.3	10.2	9.3	8.5	7.8	7.3	6.8	6.4	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.4	-	-	-	-	10
20	21.4	17.9	15.3	13.4	12.0	10.8	9.8	9.0	8.3	7.7	7.2	6.8	6.4	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.1	4.0	3.8	3.7	-	-	-	-	20
30	22.6	18.8	16.2	14.2	12.6	11.4	10.4	9.5	8.8	8.2	7.7	7.2	6.8	6.4	6.1	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	-	-	-	-	30
40	23.7	19.8	17.0	14.9	13.3	12.0	10.9	10.1	9.3	8.7	8.1	7.6	7.2	6.8	6.5	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	-	-	-	-	40
50	24.8	20.8	17.9	15.7	14.0	12.6	11.5	10.6	9.8	9.1	8.5	8.0	7.6	7.2	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	-	-	-	-	50
60	26.0	21.7	18.7	16.4	14.6	13.2	12.1	11.1	10.3	9.6	9.0	8.4	8.0	7.6	7.2	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	-	-	-	-	60
70	27.1	22.7	19.5	17.2	15.3	13.8	12.6	11.6	10.8	10.0	9.4	8.9	8.4	7.9	7.5	7.2	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	5.0	-	-	-	-	70
80	28.3	23.7	20.4	17.9	16.0	14.4	13.2	12.1	11.3	10.5	9.8	9.3	8.8	8.3	7.9	7.5	7.2	6.9	6.6	6.4	6.2	5.9	5.7	5.6	5.4	5.2	-	-	-	-	80
90	29.4	24.6	21.2	18.6	16.6	15.1	13.8	12.7	11.7	11.0	10.3	9.7	9.1	8.7	8.3	7.9	7.5	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.7	5.5	-	-	-	-	90
100	30.5	25.6	22.0	19.4	17.3	15.7	14.3	13.2	12.2	11.4	10.7	10.1	9.5	9.1	8.6	8.2	7.9	7.6	7.3	7.0	6.7	6.5	6.3	6.1	5.9	5.7	-	-	-	-	100
120	32.8	27.5	23.7	20.9	18.7	16.9	15.4	14.2	13.2	12.3	11.6	10.9	10.3	9.8	9.3	8.9	8.5	8.2	7.9	7.6	7.3	7.1	6.9	6.6	6.4	6.3	-	-	-	-	120
140	35.1	29.4	25.4	22.4	20.0	18.1	16.5	15.3	14.2	13.2	12.4	11.7	11.1	10.5	10.1	9.6	9.2	8.8	8.5	8.2	7.9	7.6	7.4	7.2	7.0	6.8	-	-	-	-	140
160	37.4	31.4	27.1	23.8	21.3	19.3	17.7	16.3	15.2	14.2	13.3	12.6	11.9	11.3	10.8	10.3	9.9	9.5	9.1	8.8	8.5	8.2	8.0	7.7	7.5	7.3	-	-	-	-	160
180	39.7	33.3	28.7	25.3	22.7	20.5	18.8	17.4	16.1	15.1	14.2	13.4	12.7	12.0	11.5	11.0	10.5	10.1	9.7	9.4	9.1	8.8	8.5	8.3	8.0	7.8	-	-	-	-	180
200	41.9	35.2	30.4	26.8	24.0	21.8	19.9	18.4	17.1	16.0	15.0	14.2	13.5	12.8	12.2	11.7	11.2	10.8	10.4	10.0	9.7	9.3	9.1	8.8	8.5	8.3	-	-	-	-	200
220	44.2	37.1	32.1	28.3	25.3	23.0	21.1	19.4	18.1	16.9	15.9	15.0	14.2	13.5	12.9	12.4	11.9	11.4	11.0	10.6	10.2	9.9	9.6	9.3	9.1	8.8	-	-	-	-	220
240	46.5	39.1	33.8	29.8	26.7	24.2	22.2	20.5	19.1	17.8	16.8	15.8	15.0	14.3	13.6	13.1	12.5	12.0	11.6	11.2	10.8	10.5	10.2	9.9	9.6	9.3	-	-	-	-	240
260	48.8	41.0	35.4	31.3	28.0	25.4	23.3	21.5	20.0	18.7	17.6	16.7	15.8	15.0	14.4	13.7	13.2	12.7	12.2	11.8	11.4	11.0	10.7	10.4	10.1	9.8	-	-	-	-	260
280	51.1	42.9	37.1	32.8	29.4	26.6	24.4	22.6	21.0	19.7	18.5	17.5	16.6	15.8	15.1	14.4	13.8	13.3	12.8	12.4	12.0	11.6	11.3	10.9	10.6	10.4	-	-	-	-	280
300	53.4	44.9	38.8	34.2	30.7	27.9	25.5	23.6	22.0	20.6	19.4	18.3	17.4	16.5	15.8	15.1	14.5	14.0	13.5	13.0	12.6	12.2	11.8	11.5	11.2	10.9	-	-	-	-	300
320	55.6	46.8	40.5	35.7	32.0	29.1	26.7	24.7	23.0	21.5	20.2	19.1	18.1	17.3	16.5	15.8	15.2	14.6	14.1	13.6	13.2	12.7	12.4	12.0	11.7	11.4	-	-	-	-	320
340	57.9	48.7	42.1	37.2	33.4	30.3	27.8	25.7	23.9	22.4	21.1	19.9	18.9	18.0	17.2	16.5	15.8	15.2	14.7	14.2	13.7	13.3	12.9	12.5	12.2	11.9	-	-	-	-	340
360	60.2	50.6	43.8	38.7	34.7	31.5	28.9	26.7	24.9	23.3	22.0	20.8	19.7	18.8	17.9	17.2	16.5	15.9	15.3	14.8	14.3	13.9	13.5	13.1	12.7	12.4	-	-	-	-	360
380	62.5	52.6	46.5	40.2	36.0	32.7	30.0	27.8	25.9	24.2	22.8	21.6	20.5	19.5	18.7	17.9	17.2	16.5	15.9	15.4	14.9	14.4	14.0	13.6	13.3	12.9	-	-	-	-	380
400	64.8	54.5	47.2	41.7	37.4	34.0	31.2	28.8	26.9	25.2	23.7	22.4	21.3	20.3	19.4	18.6	17.8	17.2	16.6	16.0	15.5	15.0	14.6	14.2	13.8	13.4	-	-	-	-	400
420	67.1	56.4	48.8	43.2	38.7	35.2	32.3	29.9	27.8	26.1	24.6	23.2	22.1	21.0	20.1	19.3	18.5	17.8	17.2	16.6	16.1	15.6	15.1	14.7	14.3	13.9	-	-	-	-	420
440	69.3	58.4	50.5	44.6	40.1	36.4	33.4	30.9	28.8	27.0	25.4	24.1	22.8	21.8	20.8	19.9	19.2	18.4	17.8	17.2	16.6	16.1	15.7	15.2	14.8	14.5	-	-	-	-	440
460	71.6	60.3	52.2	46.1	41.4	37.6	34.5	32.0	29.8	27.9	26.3	24.9	23.6	22.5	21.5	20.6	19.8	19.1	18.4	17.8	17.2	16.7	16.2	15.8	15.4	15.0	-	-	-	-	460
480	73.9	62.2	53.9	47.6	42.7	38.8	35.7	33.0	30.8	28.8	27.2	25.7	24.4	23.3	22.2	21.3	20.5	19.7	19.0	18.4	17.8	17.3	16.8	16.3	15.9	15.5	-	-	-	-	480
500	76.2	64.1	55.5	49.1	44.1	40.1	36.8	34.0	31.7	29.7	28.0	26.5	25.2	24.0	23.0	22.0	21.1	20.4	19.7	19.0	18.4	17.8	17.3	16.8	16.4	16.0	-	-	-	-	500
600	87.6	73.8	63.9	56.5	50.8	46.2	42.4	39.3	36.6	34.3	32.4	30.6	29.1	27.8	26.5	25.5	24.5	23.6	22.8	22.0	21.3	20.7	20.1	19.5	19.0	18.5	-	-	-	-	600
700	99.0	83.4	72.3	63.9	57.5	52.3	48.0	44.5	41.5	38.9	36.7	34.7	33.0	31.5	30.1	28.9	27.8	26.8	25.8	25.0	24.2	23.5	22.8	22.2	21.6	21.1	-	-	-	-	700
800	110.4	93.1	80.7	71.4	64.1	58.4	53.6	49.7	46.4	43.5	41.0	38.8	36.9	35.2	33.7	32.3	31.1	30.0	28.9	28.0	27.1	26.3	25.6	24.9	24.3	23.7	-	-	-	-	800
900	121.8	102.7	89.0	78.8	70.8	64.5	59.3	54.9	51.2	48.1	45.3	43.0	40.8	39.0	37.3	35.8	34.4	33.2	32.0	31.0	30.1	29.2	28.4	27.6	26.9	26.2	-	-	-	-	900
1000	133.2	112.3	97.4	86.2	77.5	70.6	64.9	60.1	56.1	52.7	49.7	47.1	44.8	42.7	40.9	39.2	37.7	36.4	35.1	34.0	33.0	32.0	31.1	30.3	29.5	28.8	-	-	-	-	1000
1100	144.6	122.0	105.8	93.7	84.2	76.7	70.5	65.3	61.0	57.2	54.0	51.2	48.7	46.5	44.5	42.7	41.1	39.6	38.2	37.0	35.9	34.8	33.9	33.0	32.1	31.3	-	-	-	-	1100
1200	156.0	131.6	114.2	101.1	90.9	82.8	76.1	70.6	65.9	61.8	58.3	55.3	52.6	50.2	48.1	46.1	44.4	42.8	41.3	40.0	38.8	37.7	36.6	35.7	34.8	33.9	-	-	-	-	1200
1300	167.5	141.3	122.5	108.5	97.6	88.9	81.7	75.8	70.7	66.4	62.7	59.4	56.5	53.9	51.6	50.0	47.7	46.0	44.4	43.0	41.7	40.5	39.4	38.3	37.4	36.5	-	-	-	-	1300
1400	178.9	150.9	130.9	115.9	104.3	95.0	87.3	81.0	75.6	71.0	67.0	63.5	60.4	57.7	55.2	53.0	51.0	49.2	47.5	46.0	44.6	43.3	42.1	41.0	40.0	39.0	-	-	-	-	1400
1500	190.3	160.5	139.3	123.4	111.0	101.1	93.0	86.2	80.5	75.6	71.3	67.6	64.3	61.4	58.8	56.5	54.3	52.4	50.6	49.0	47.5	46.2	44.9	43.7	42.6	41.6	-	-	-	-	1500
1600	201.7	170.2	147.7	130.8	117.7	107.2	98.6	91.4	85.4	80.2	75.7	71.7	68.2	65.2	62.4	59.9	57.7	55.6	53.7	52.0	50.5	49.0	47.6	46.4	45.2	44.1	-	-	-	-	1600
1700	213.1	179.8	156.0	138.2	124.4	113.3	104.2	96.6	90.2	84.7	80.0	75.8	72.2	68.9	66.0	63.3	61.0	58.8	56.8	55.0	53.4	51.8	50.4	49.1	47.9	46.7	-	-	-	-	1700
1800	224.5	189.5	164.4	145.7	131.0	119.4	109.8	101.8	95.1	89.3	84.3	79.9	76.1	72.6	69.6	66.8	64.3	62.0	59.9	58.0	56.3	54.7	53.2	51.8	50.5	49.3	-	-	-	-	1800
1900	235.9	199.1	172.8	153.1	137.7	125.5	115.4	107.1	100.0	93.9	88.6	84.0	80.0	76.4	73.1	70.2	67.6	65.2	63.0	61.0	59.2	57.5	55.9	54.5	53.1	51.8	-	-	-	-	1900
2000	247.3	208.7	181.2	160.5	144.4	131.6	121.0	112.3	104.8	98.5	93.0	88.2	83.9	80.1	76.7	73.7	70.9	68.4	66.1	64.0	62.1	60.3	58.7	57.1	55.7	54.4	-	-	-	-	2000
2100	258.7	218.4	189.6	167.9	151.1	137.7	126.7	117.5	109.7	103.1	97.3	92.3	87.8	83.9	80.3	77.1	74.2	71.6	69.2	67.0	65.0	63.2	61.4	59.8	58.3	56.9	-	-	-	-	2100
2200	270.1	228.0	197.9	175.4	157.8	143.8	132.3	122.7	114.6	107.7	101.6	96.4	91.7	87.6	83.9	80.6	77.6	74.8	72.3	70.0	67.9	66.0	64.2	62.5	61.0	59.5	-	-	-	-	2200
2300	281.6	237.7	206.3	182.8	164.5	149.9	137.9	127.9	119.5	112.2	106.0	100.5	95.6	91.3	87.5	84.0	80.9	78.0	75.4	73.0	70.8	68.8	66.9	65.2	63.6	62.1	-	-	-	-	2300
2400	293.0	247.3	214.7	190.2	171.2	156.0	143.5	133.1	124.3	116.8	110.3	104.6	99.6	95.1	91.1	87.5	84.2	81.2	78.5	76.0	73.8	71.7	69.7	67.9	66.2	64.6	-	-	-	-	2400
2500	304.4	256.9	223.1	197.6	177.9	162.1	149.1	138.3	129.2	121.4	114.6	108.7	103.5	98.8	94.7	90.9	87.5	84.4	81.6	79.0	76.7	74.5	72.5	70.6	68.8	67.2	-	-	-	-	2500
2600	315.8	266.6	231.4	205.1	184.6	168.2	154.7	143.6	134.1	126.0	119.0	112.8	107.4	102.6	98.2	94.4	90.8	87.6	84.7	82.1	79.6	77.3	75.2	73.3	71.4	69.7	-	-	-	-	2600
2700	327.2	276.2	239.8	212.5	191.3	174.3	160.4	148.8	139.0	130.6	123.3	116.9	111.3	106.3	101.8	97.8	94.2	90.8	87.8	85.1	82.5	80.2	78.0	75.9	74.1	72.3	-	-	-	-	2700
Term. 2/	19.128	15.940	13.663	11.955	10.627	9.564	8.695	7.970	7.357	6.831	6.375	5.978	5.626	5.313	5.034	4.782	4.554	4.347	4.158	3.985	3.826	3.678	3.542	3.416	3.298	3.188	-	-	-	-	Term. 2/
L. H. 3/	.114170	.096400	.083757	.074275	.066300	.061000	.056173	.052150	.048746	.045879	.043300	.041088	.039135	.037400	.035847	.034450	.033186	.032036	.030987	.030025	.029140	.028323	.027567	.026864	.026210	.025600	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 20.1 tons and a ratio of empty car miles to loaded car miles of 0.880. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.21.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.56.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.70.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 76.—TERRITORY NO. 11 - TOTAL WESTERN, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.7	14.8	12.7	11.1	9.9	8.9	8.1	7.4	6.9	6.4	5.9	5.6	5.3	5.0	4.7	4.5	4.3	4.1	3.9	3.7	3.6	3.5	3.3	3.2	3.1	3.0	-	-	-	-	10
20	19.1	15.9	13.7	12.0	10.7	9.6	8.8	8.0	7.4	6.9	6.5	6.1	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.1	3.9	3.8	3.7	3.5	3.4	3.3	-	-	-	-	20
30	20.5	17.1	14.7	12.9	11.5	10.4	9.4	8.7	8.0	7.5	7.0	6.6	6.2	5.9	5.6	5.3	5.1	4.8	4.6	4.5	4.3	4.1	4.0	3.9	3.7	3.6	-	-	-	-	30
40	21.9	18.3	15.7	13.8	12.3	11.1	10.1	9.3	8.6	8.0	7.5	7.1	6.7	6.3	6.0	5.7	5.5	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	-	-	-	-	40
50	23.3	19.5	16.8	14.7	13.1	11.9	10.8	9.9	9.2	8.6	8.0	7.6	7.1	6.8	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	-	-	-	-	50
60	24.7	20.7	17.8	15.6	13.9	12.6	11.5	10.6	9.8	9.1	8.6	8.1	7.6	7.2	6.9	6.5	6.2	6.0	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.5	-	-	-	-	60
70	26.1	21.9	18.8	16.5	14.8	13.3	12.2	11.2	10.4	9.7	9.1	8.5	8.1	7.7	7.3	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	-	-	-	-	70
80	27.5	23.1	19.9	17.5	15.6	14.1	12.9	11.8	11.0	10.2	9.6	9.0	8.5	8.1	7.7	7.4	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.3	5.1	-	-	-	-	80
90	28.9	24.2	20.9	18.4	16.4	14.8	13.5	12.5	11.6	10.8	10.1	9.5	9.0	8.6	8.1	7.8	7.4	7.1	6.9	6.6	6.4	6.1	5.9	5.8	5.6	5.4	-	-	-	-	90
100	30.4	25.4	21.9	19.3	17.2	15.6	14.2	13.1	12.2	11.3	10.6	10.0	9.5	9.0	8.6	8.2	7.8	7.5	7.2	6.9	6.7	6.5	6.3	6.1	5.9	5.7	-	-	-	-	100
120	33.2	27.8	24.0	21.1	18.9	17.1	15.6	14.4	13.3	12.5	11.7	11.0	10.4	9.9	9.4	9.0	8.6	8.3	8.0	7.7	7.4	7.1	6.9	6.7	6.5	6.3	-	-	-	-	120
140	36.0	30.2	26.0	22.9	20.5	18.5	17.0	15.6	14.5	13.6	12.7	12.0	11.4	10.8	10.3	9.8	9.4	9.0	8.7	8.4	8.1	7.8	7.6	7.3	7.1	6.9	-	-	-	-	140
160	38.8	32.5	28.1	24.7	22.1	20.0	18.3	16.9	15.7	14.7	13.8	13.0	12.3	11.7	11.1	10.6	10.2	9.8	9.4	9.1	8.8	8.5	8.2	8.0	7.7	7.5	-	-	-	-	160
180	41.6	34.9	30.1	26.5	23.8	21.5	19.7	18.2	16.9	15.8	14.8	14.0	13.2	12.6	12.0	11.5	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.4	8.1	-	-	-	-	180
200	44.4	37.3	32.2	28.4	25.4	23.0	21.1	19.4	18.1	16.9	15.9	15.0	14.2	13.5	12.9	12.3	11.8	11.3	10.9	10.5	10.1	9.8	9.5	9.2	9.0	8.7	-	-	-	-	200
220	47.2	39.7	34.2	30.2	27.0	24.5	22.4	20.7	19.2	18.0	16.9	16.0	15.1	14.4	13.7	13.1	12.6	12.1	11.6	11.2	10.8	10.5	10.2	9.9	9.6	9.3	-	-	-	-	220
240	50.1	42.0	36.3	32.0	28.7	26.0	23.8	22.0	20.4	19.1	18.0	16.9	16.1	15.3	14.6	13.9	13.4	12.8	12.4	11.9	11.5	11.2	10.8	10.5	10.2	9.9	-	-	-	-	240
260	52.9	44.4	38.4	33.8	30.3	27.5	25.2	23.2	21.6	20.2	19.0	17.9	17.0	16.2	15.4	14.8	14.2	13.6	13.1	12.6	12.2	11.8	11.5	11.1	10.8	10.5	-	-	-	-	260
280	55.7	46.8	40.4	35.6	31.9	29.0	26.5	24.5	22.8	21.3	20.0	18.9	17.9	17.1	16.3	15.6	14.9	14.4	13.8	13.4	12.9	12.5	12.1	11.8	11.4	11.1	-	-	-	-	280
300	58.5	49.1	42.5	37.5	33.6	30.4	27.9	25.8	24.0	22.4	21.1	19.9	18.9	18.0	17.1	16.4	15.7	15.1	14.6	14.1	13.6	13.2	12.8	12.4	12.0	11.7	-	-	-	-	300
320	61.3	51.5	44.5	39.3	35.2	31.9	29.3	27.0	25.1	23.5	22.1	20.9	19.8	18.9	18.0	17.2	16.5	15.9	15.3	14.8	14.3	13.8	13.4	13.0	12.7	12.3	-	-	-	-	320
340	64.1	53.9	46.6	41.1	36.8	33.4	30.6	28.3	26.3	24.6	23.2	21.9	20.8	19.8	18.9	18.0	17.3	16.7	16.0	15.5	15.0	14.5	14.1	13.7	13.3	12.9	-	-	-	-	340
360	66.9	56.3	48.6	42.9	38.5	34.9	32.0	29.6	27.5	25.7	24.2	22.9	21.7	20.7	19.7	18.9	18.1	17.4	16.8	16.2	15.7	15.2	14.7	14.3	13.9	13.5	-	-	-	-	360
380	69.8	58.6	50.7	44.7	40.1	36.4	33.3	30.8	28.7	26.8	25.3	23.9	22.6	21.5	20.6	19.7	18.9	18.2	17.5	16.9	16.4	15.8	15.4	14.9	14.5	14.1	-	-	-	-	380
400	72.6	61.0	52.7	46.5	41.7	37.9	34.7	32.1	29.9	28.0	26.3	24.9	23.6	22.4	21.4	20.5	19.7	18.9	18.3	17.6	17.0	16.5	16.0	15.6	15.1	14.7	-	-	-	-	400
420	75.4	63.4	54.8	48.4	43.4	39.4	36.1	33.3	31.0	29.1	27.3	25.8	24.5	23.3	22.3	21.3	20.5	19.7	19.0	18.3	17.7	17.2	16.7	16.2	15.7	15.3	-	-	-	-	420
440	78.2	65.8	56.9	50.2	45.0	40.8	37.4	34.6	32.2	30.2	28.4	26.8	25.5	24.2	23.1	22.2	21.3	20.5	19.7	19.0	18.4	17.8	17.3	16.8	16.4	15.9	-	-	-	-	440
460	81.0	68.1	58.9	52.0	46.6	42.3	38.8	35.9	33.4	31.3	29.4	27.8	26.4	25.1	24.0	23.0	22.1	21.2	20.5	19.8	19.1	18.5	18.0	17.5	17.0	16.5	-	-	-	-	460
480	83.8	70.5	61.0	53.8	48.3	43.8	40.2	37.1	34.6	32.4	30.5	28.8	27.3	26.0	24.9	23.8	22.9	22.0	21.2	20.5	19.8	19.2	18.6	18.1	17.6	17.1	-	-	-	-	480
500	86.7	72.9	63.0	55.6	49.9	45.3	41.5	38.4	35.8	33.5	31.5	29.8	28.3	26.9	25.7	24.6	23.6	22.7	21.9	21.2	20.5	19.9	19.3	18.7	18.2	17.7	-	-	-	-	500
600	100.7	84.7	73.3	64.7	58.1	52.7	48.4	44.7	41.7	39.0	36.7	34.7	33.0	31.4	30.0	28.7	27.6	26.6	25.6	24.7	23.9	23.2	22.5	21.9	21.3	20.7	-	-	-	-	600
700	114.8	96.6	83.6	73.8	66.2	60.2	55.2	51.1	47.6	44.6	42.0	39.7	37.7	35.9	34.3	32.8	31.5	30.4	29.3	28.3	27.4	26.5	25.8	25.0	24.4	23.7	-	-	-	-	700
800	128.9	108.4	93.9	82.9	74.4	67.6	62.0	57.4	53.5	50.1	47.2	44.6	42.4	40.4	38.6	37.0	35.5	34.2	33.0	31.9	30.8	29.9	29.0	28.2	27.4	26.7	-	-	-	-	800
900	142.9	120.3	104.1	92.0	82.6	75.0	68.9	63.7	59.4	55.6	52.4	49.6	47.1	44.8	42.9	41.1	39.5	38.0	36.6	35.4	34.3	33.2	32.3	31.4	30.5	29.8	-	-	-	-	900
1000	157.0	132.2	114.4	101.1	90.7	82.5	75.7	70.0	65.3	61.2	57.6	54.5	51.8	49.3	47.1	45.2	43.4	41.8	40.3	39.0	37.7	36.6	35.5	34.5	33.6	32.8	-	-	-	-	1000
1100	171.1	144.0	124.7	110.2	98.9	89.9	82.5	76.4	71.2	66.7	62.8	59.4	56.5	53.8	51.4	49.3	47.4	45.6	44.0	42.5	41.2	39.9	38.8	37.7	36.7	35.8	-	-	-	-	1100
1200	185.2	155.9	135.0	119.3	107.1	97.3	89.3	82.7	77.1	72.2	68.0	64.4	61.2	58.3	55.7	53.4	51.3	49.4	47.7	46.1	44.6	43.3	42.0	40.9	39.8	.8	-	-	-	-	1200
1300	199.2	167.7	145.3	128.4	115.3	104.8	96.2	89.0	83.0	77.8	73.3	69.3	65.9	62.8	60.0	57.5	55.3	53.2	51.4	49.6	48.1	46.6	45.3	44.0	42.9	41.8	-	-	-	-	1300
1400	213.3	179.6	155.5	137.5	123.4	112.2	103.0	95.3	88.9	83.3	78.5	74.3	70.5	67.2	64.3	61.6	59.2	57.0	55.0	53.2	51.5	50.0	48.5	47.2	45.9	44.8	-	-	-	-	1400
1500	227.4	191.5	165.8	146.6	131.6	119.6	109.8	101.7	94.8	88.8	83.7	79.2	75.2	71.7	68.6	65.7	63.2	60.8	58.7	56.8	55.0	53.3	51.8	50.3	49.0	47.8	-	-	-	-	1500
1600	241.5	203.3	176.1	155.7	139.8	127.1	116.7	108.0	100.6	94.4	88.9	84.1	79.9	76.2	72.9	69.8	67.1	64.6	62.4	60.3	58.4	56.6	55.0	53.5	52.1	50.8	-	-	-	-	1600
1700	255.5	215.2	186.4	164.7	147.9	134.5	123.5	114.3	106.5	99.9	94.1	89.1	84.6	80.7	77.1	74.0	71.1	68.5	66.1	63.9	61.9	60.1	58.3	56.7	55.2	53.8	-	-	-	-	1700
1800	269.6	227.0	196.6	173.8	156.1	141.9	130.3	120.6	112.4	105.4	99.4	94.0	89.3	85.2	81.4	78.1	75.0	72.3	69.7	67.4	65.3	63.3	61.5	59.8	58.3	56.8	-	-	-	-	1800
1900	283.7	238.9	206.9	182.9	164.3	149.3	137.1	127.0	118.3	111.0	104.6	99.0	94.0	89.6	85.7	82.2	79.0	76.1	73.4	71.0	68.7	66.7	64.8	63.0	61.3	59.8	-	-	-	-	1900
2000	297.8	250.8	217.2	192.0	172.4	156.8	144.0	133.3	124.2	116.5	109.8	103.9	98.7	94.1	90.0	86.3	82.9	79.9	77.1	74.5	72.2	70.0	68.0	66.2	64.4	62.8	-	-	-	-	2000
2100	311.8	262.6	227.5	201.1	180.6	164.2	150.8	139.6	130.1	122.0	115.0	108.9	103.4	98.6	94.3	90.4	86.9	83.7	80.8	78.1	75.6	73.4	71.3	69.3	67.5	65.8	-	-	-	-	2100
2200	325.9	274.5	237.8	210.2	188.8	171.6	157.6	145.9	136.0	127.6	120.2	113.8	108.1	103.1	98.6	94.5	90.8	87.5	84.6	81.7	79.1	76.7	74.5	72.5	70.6	68.8	-	-	-	-	2200
2300	340.0	286.3	248.0	219.3	197.0	179.1	164.4	152.3	141.9	133.1	125.4	118.7	112.8	107.6	102.9	98.6	94.8	91.3	88.1	85.2	82.5	80.1	77.8	75.6	73.7	71.8	-	-	-	-	2300
2400	354.1	298.2	258.3	228.4	205.1	186.5	171.3	158.6	147.8	138.6	130.7	123.7	117.5	112.0	107.1	102.7	98.7	95.1	91.8	88.8	86.0	83.4	81.0	78.8	76.7	74.8	-	-	-	-	2400
2500	368.1	310.1	268.6	237.5	213.3	193.9	178.1	164.9	153.7	144.2	135.9	128.6	122.2	116.5	111.4	106.8	102.7	98.9	95.5	92.3	89.4	86.7	84.3	82.0	79.8	77.8	-	-	-	-	2500
2600	382.2	321.9	278.9	246.6	221.5	201.4	184.9	171.2	159.6	149.7	141.1	133.6	126.9	121.0	115.7	111.0	106.7	102.7	99.2	95.9	92.9	90.1	87.5	85.1	82.9	80.8	-	-	-	-	2600
2700	396.3	333.8	289.2	255.7	229.6	208.8	191.8	177.6	165.5	155.2	146.3	138.5	131.6	125.5	120.0	115.1	110.6	106.5	102.8	99.4	96.3	93.4	90.8	88.3	86.0	83.8	-	-	-	-	2700
Term. 2/	16.282	13.568	11.630	10.176	9.046	8.141	7.401	6.784	6.262	5.815	5.427	5.088	4.789	4.523	4.285	4.071	3.877	3.700	3.540	3.392	3.256	3.131	3.015	2.908	2.807	2.714	-	-	-	-	Term. 2/
L. H. 3/	.140740	.118600	.102786	.090925	.081700	.074320	.068282	.063250	.058992	.055343	.052180	.049413	.046971	.044800	.042858	.041110	.039529	.038091	.036778	.035575	.034468	.033446	.032500	.031621	.030803	.030040	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.695. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.22.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.32.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.21.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.56.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.70.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 11 - Total Western, incl. Southwestern, West. Trunk Line, Mt. Pac., No. Illinois and Sou. Missouri

LESS-CARLOAD

TABLE 77.—TERRITORY NO. 11 - TOTAL WESTERN, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	91.4	73.0	63.8	58.2	54.6	51.9	50.0	48.4	47.2	46.2	45.3	44.6	44.0	43.5	43.0	42.6	42.3	41.9	41.7	41.4	41.1	40.9	40.7	40.5	40.4	40.2	40.1	39.9	39.8	10
20	96.2	76.2	66.2	60.3	56.3	53.4	51.3	49.6	48.3	47.2	46.3	45.5	44.9	44.3	43.8	43.4	43.0	42.6	42.3	42.0	41.7	41.5	41.3	41.1	40.9	40.7	40.6	40.4	40.3	20
30	100.9	79.4	68.7	62.3	58.0	54.9	52.6	50.8	49.4	48.2	47.2	46.4	45.7	45.1	44.5	44.1	43.6	43.3	42.9	42.6	42.3	42.1	41.9	41.6	41.4	41.3	41.1	40.9	40.8	30
40	105.7	82.7	71.2	64.3	59.7	56.4	53.9	52.0	50.5	49.2	48.2	47.3	46.5	45.9	45.3	44.8	44.3	43.9	43.6	43.2	42.9	42.7	42.4	42.2	42.0	41.8	41.6	41.4	41.3	40
50	110.4	85.9	73.6	66.3	61.4	57.9	55.3	53.2	51.6	50.2	49.1	48.2	47.4	46.7	46.1	45.5	45.0	44.6	44.2	43.9	43.5	43.3	43.0	42.7	42.5	42.3	42.1	41.9	41.8	50
60	115.2	89.1	76.1	68.3	63.1	59.4	56.6	54.4	52.7	51.2	50.1	49.1	48.2	47.5	46.8	46.2	45.7	45.3	44.9	44.5	44.1	43.8	43.6	43.3	43.0	42.8	42.6	42.4	42.2	60
70	119.9	92.4	78.6	70.3	64.8	60.9	57.9	55.6	53.8	52.3	51.0	49.9	49.0	48.2	47.6	47.0	46.4	45.9	45.5	45.1	44.7	44.4	44.1	43.8	43.6	43.3	43.1	42.9	42.7	70
80	124.7	95.6	81.0	72.3	66.5	62.3	59.2	56.8	54.9	53.3	51.9	50.8	49.9	49.0	48.3	47.7	47.1	46.6	46.1	45.7	45.3	45.0	44.7	44.4	44.1	43.9	43.6	43.4	43.2	80
90	129.4	98.8	83.5	74.3	68.2	63.8	60.6	58.0	56.0	54.3	52.9	51.7	50.7	49.8	49.1	48.4	47.8	47.3	46.8	46.3	45.9	45.6	45.2	44.9	44.6	44.4	44.1	43.9	43.7	90
100	134.2	102.0	86.0	76.3	69.9	65.3	61.9	59.2	57.1	55.3	53.8	52.6	51.5	50.6	49.8	49.1	48.5	47.9	47.4	47.0	46.5	46.2	45.8	45.5	45.2	44.9	44.7	44.4	44.2	100
120	143.7	108.5	90.9	80.4	73.3	68.3	64.5	61.6	59.2	57.3	55.7	54.4	53.2	52.2	51.3	50.6	49.9	49.2	48.7	48.2	47.7	47.3	46.9	46.6	46.3	46.0	45.7	45.4	45.2	120
140	153.2	115.0	95.8	84.4	76.7	71.3	67.2	64.0	61.4	59.4	57.6	56.1	54.9	53.8	52.8	52.0	51.2	50.6	50.0	49.4	48.9	48.5	48.1	47.7	47.3	47.0	46.7	46.4	46.1	140
160	162.7	121.4	100.8	88.4	80.1	74.2	69.8	66.4	63.6	61.4	59.5	57.9	56.6	55.4	54.3	53.4	52.6	51.9	51.3	50.7	50.1	49.6	49.2	48.8	48.4	48.0	47.7	47.4	47.1	160
180	172.2	127.9	105.7	92.4	83.6	77.2	72.5	68.8	65.8	63.4	61.4	59.7	58.2	57.0	55.9	54.9	54.0	53.2	52.5	51.9	51.3	50.8	50.3	49.9	49.5	49.1	48.7	48.4	48.1	180
200	181.7	134.3	110.6	96.4	87.0	80.2	75.1	71.2	68.0	65.4	63.3	61.5	59.9	58.5	57.4	56.3	55.4	54.6	53.8	53.1	52.5	52.0	51.4	51.0	50.5	50.1	49.7	49.4	49.1	200
220	191.2	140.8	115.6	100.5	90.4	83.2	77.8	73.6	70.2	67.5	65.2	63.2	61.6	60.1	58.9	57.8	56.8	55.9	55.1	54.4	53.7	53.1	52.6	52.1	51.6	51.2	50.8	50.4	50.0	220
240	200.7	147.2	120.5	104.5	93.8	86.2	80.4	76.0	72.4	69.5	67.1	65.0	63.2	61.7	60.4	59.2	58.1	57.2	56.4	55.6	54.9	54.3	53.7	53.2	52.7	52.2	51.8	51.4	51.0	240
260	210.2	153.7	125.5	108.5	97.2	89.1	83.1	78.4	74.6	71.5	68.9	66.8	64.9	63.3	61.9	60.6	59.5	58.5	57.6	56.8	56.1	55.4	54.8	54.3	53.7	53.3	52.8	52.4	52.0	260
280	219.7	150.2	130.4	112.5	100.6	92.1	85.7	80.8	76.8	73.5	70.8	68.5	66.6	64.9	63.4	62.1	60.9	59.9	58.9	58.1	57.3	56.6	56.0	55.4	54.8	54.3	53.8	53.4	53.0	280
300	229.2	166.6	135.3	116.5	104.0	95.1	88.4	83.2	79.0	75.6	72.7	70.3	68.3	66.5	64.9	63.5	62.3	61.2	60.2	59.3	58.5	57.8	57.1	56.5	55.9	55.3	54.8	54.4	53.9	300
320	238.7	173.1	140.3	120.6	107.4	98.1	91.0	85.6	81.2	77.6	74.6	72.1	69.9	68.0	66.4	65.0	63.7	62.5	61.5	60.5	59.7	58.9	58.2	57.5	56.9	56.4	55.9	55.4	54.9	320
340	248.2	179.5	145.2	124.6	110.8	101.0	93.7	88.0	83.4	79.6	76.5	73.9	71.6	69.6	67.9	66.4	65.1	63.8	62.8	61.8	60.9	60.1	59.3	58.6	58.0	57.4	56.9	56.4	55.9	340
360	257.7	186.0	150.1	128.6	114.3	104.0	96.3	90.3	85.6	81.7	78.4	75.6	73.3	71.2	69.4	67.8	66.4	65.2	64.0	63.0	62.1	61.2	60.5	59.7	59.1	58.5	57.9	57.4	56.9	360
380	267.2	192.4	155.1	132.6	117.7	107.0	99.0	92.7	87.8	83.7	80.3	77.4	74.9	72.8	70.9	69.3	67.8	66.5	65.3	64.3	63.3	62.4	61.6	60.8	60.1	59.5	58.9	58.4	57.8	380
400	276.7	198.9	160.0	136.6	121.1	110.0	101.6	95.1	89.9	85.7	82.2	79.2	76.6	74.4	72.4	70.7	69.2	67.8	66.6	65.5	64.5	63.6	62.7	61.9	61.2	60.6	59.9	59.4	58.8	400
420	286.2	205.4	164.9	140.7	124.5	112.9	104.3	97.5	92.1	87.7	84.1	80.5	78.3	76.0	73.9	72.2	70.6	69.2	67.9	66.7	65.7	64.7	63.8	63.0	62.3	61.6	61.0	60.4	59.8	420
440	295.7	211.8	169.9	144.7	127.9	115.9	106.9	99.9	94.3	89.8	85.9	82.7	79.9	77.6	75.5	73.6	72.0	70.5	69.2	68.0	66.9	65.9	65.0	64.1	63.3	62.6	62.0	61.4	60.8	440
460	305.2	218.3	174.8	148.7	131.3	118.9	109.6	102.3	96.5	91.8	87.8	84.5	81.6	79.1	77.0	75.0	73.3	71.8	70.4	69.2	68.1	67.0	66.1	65.2	64.4	63.7	63.0	62.3	61.7	460
480	314.7	224.7	179.7	152.7	134.7	121.9	112.2	104.7	98.7	93.8	89.7	86.3	83.3	80.7	78.5	76.5	74.7	73.1	71.7	70.4	69.3	68.2	67.2	66.3	65.5	64.7	64.0	63.3	62.7	480
500	324.2	231.2	184.7	156.7	138.1	124.8	114.9	107.1	100.9	95.8	91.6	88.0	85.0	82.3	80.0	77.9	76.1	74.5	73.0	71.7	70.5	69.4	68.4	67.4	66.6	65.8	65.0	64.3	63.7	500
600	371.8	263.5	209.3	176.8	155.2	139.7	128.1	119.1	111.9	106.0	101.1	96.9	93.3	90.2	87.5	85.1	83.0	81.1	79.4	77.9	76.4	75.2	74.0	72.9	71.9	71.0	70.1	69.3	68.6	600
700	419.3	295.8	234.0	197.0	172.2	154.6	141.4	131.1	122.8	116.1	110.5	105.7	101.7	98.1	95.1	92.3	89.9	87.7	85.8	84.0	82.4	81.0	79.6	78.4	77.2	76.2	75.2	74.3	73.4	700
800	466.8	328.0	258.7	217.1	189.3	169.5	154.6	143.1	133.6	126.2	119.9	114.6	110.0	106.1	102.6	99.5	96.8	94.4	92.2	90.2	88.4	86.8	85.3	83.9	82.6	81.4	80.3	79.3	78.3	800
900	514.3	360.3	283.4	237.2	206.4	184.4	167.9	155.0	144.8	136.4	129.4	123.5	118.4	114.0	110.1	106.7	103.7	101.0	98.6	96.4	94.4	92.6	90.9	89.4	87.9	86.6	85.4	84.3	83.2	900
1000	561.8	392.6	308.0	257.3	223.4	199.3	181.1	167.0	155.7	146.5	138.8	132.3	126.7	121.9	117.7	114.0	110.6	107.7	105.0	102.6	100.4	98.4	96.5	94.8	93.3	91.8	90.5	89.2	88.1	1000
1100	609.3	424.9	332.7	277.4	240.5	214.1	194.4	179.0	166.7	156.7	148.3	141.2	135.1	129.8	125.2	121.2	117.5	114.3	111.4	108.8	106.4	104.2	102.2	100.3	98.6	97.0	95.6	94.2	92.9	1100
1200	656.8	457.2	357.4	297.5	257.5	229.0	207.8	191.0	177.7	166.8	157.7	150.0	143.4	137.7	132.8	128.4	124.4	120.9	117.8	114.9	112.3	110.0	107.8	105.8	104.0	102.3	100.7	99.2	97.8	1200
1300	704.4	489.5	382.0	317.6	274.6	243.9	220.9	203.0	188.6	176.9	167.2	158.9	151.8	145.7	140.3	135.6	131.3	127.6	124.2	121.1	118.3	115.8	113.4	111.3	109.3	107.5	105.8	104.2	102.7	1300
1400	751.9	521.8	406.7	337.7	291.6	258.8	234.1	214.9	199.6	187.1	176.6	167.7	160.2	153.6	147.8	142.8	138.2	134.2	130.6	127.3	124.3	121.6	119.1	116.8	114.6	112.7	110.9	109.2	107.6	1400
1500	799.4	554.1	431.4	357.8	308.7	273.7	247.4	226.9	210.6	197.2	186.0	176.6	168.5	161.5	155.4	150.0	145.2	140.9	137.0	133.5	130.3	127.4	124.7	122.3	120.0	117.9	115.9	114.1	112.4	1500
1600	846.9	586.3	456.1	377.9	325.8	288.5	260.6	238.9	221.5	207.3	195.5	185.5	176.9	169.4	162.9	157.2	152.1	147.5	143.4	139.7	136.3	133.2	130.3	127.7	125.3	123.1	121.0	119.1	117.3	1600
1700	894.4	618.6	480.7	398.0	342.8	303.4	273.9	250.9	232.5	217.5	204.9	194.3	185.2	177.3	170.5	164.4	159.0	154.1	149.8	145.8	142.2	139.0	136.0	133.2	130.7	128.3	126.1	124.1	122.2	1700
1800	941.9	650.9	505.4	418.1	359.9	318.3	287.1	262.9	243.5	227.6	214.4	203.2	193.6	185.3	178.0	171.6	165.9	160.8	156.2	152.0	148.2	144.8	141.6	138.7	136.0	133.5	131.2	129.1	127.1	1800
1900	989.4	683.2	530.1	438.2	376.9	333.2	300.4	274.9	254.4	237.7	223.8	212.0	201.9	193.2	185.5	178.8	172.8	167.4	162.6	158.2	154.2	150.6	147.3	144.2	141.4	138.7	136.3	134.1	131.9	1900
2000	1,037.0	715.5	554.7	458.3	394.0	348.1	313.6	286.8	265.4	247.9	233.3	220.9	210.3	201.1	193.1	186.0	179.7	174.0	169.0	164.4	160.2	156.4	152.9	149.7	146.7	144.0	141.4	139.0	136.8	2000
2100	1,084.5	747.8	579.4	478.4	411.0	363.0	326.9	298.8	276.4	258.0	242.7	229.7	218.6	209.0	200.6	193.2	186.6	180.7	175.4	170.6	166.2	162.2	158.5	155.2	152.0	149.2	146.5	144.0	141.7	2100
2200	1,132.0	780.1	604.1	498.5	428.1	377.8	340.1	310.8	287.3	268.1	252.1	238.6	227.0	216.9	208.2	200.4	193.5	187.3	181.8	176.7	172.2	168.0	164.2	160.6	157.4	154.4	151.6	149.0	146.6	2200
2300	1,179.5	812.3	628.8	518.6	445.2	392.7	353.4	322.8	298.3	278.3	261.6	247.5	235.4	224.9	215.7	207.6	200.4	194.0	188.2	182.9	178.1	173.8	169.8	166.1	162.7	159.6	156.7	154.0	151.4	2300
2400	1,227.0	844.6	653.4	538.7	462.2	407.6	366.6	334.8	309.3	288.4	271.0	256.3	243.7	232.8	223.2	214.8	207.3	200.6	194.6	189.1	184.1	179.6	175.4	171.6	168.1	164.8	161.8	159.0	156.3	2400
2500	1,274.5	876.9	678.1	558.8	479.3	422.5	379.9	346.7	320.2	298.5	280.5	265.2	252.1	240.7	230.8	222.0	214.2	207.2	201.0	195.3	190.1	185.4	181.1	177.1	173.4	170.0	166.9	163.9	161.2	2500
2600	1,322.0	909.2	702.8	578.9	496.3	437.4	393.1	358.7	331.2	308.7	289.9	274.0	260.4	248.6	238.3	229.2	221.1	213.9	207.4	201.5	196.1	191.2	186.7	182.6	178.8	175.2	172.0	168.9	166.1	2600
2700	1,369.5	941.5	727.4	599.0	513.4	452.2	406.4	370.7	342.2	318.8	299.4	282.9	268.8	256.5	245.9	236.4	228.0	220.5	213.8	207.6	202.1	197.0	192.3	188.1	184.1	180.5	177.0	173.9	170.9	2700
Term. 2/	86.670	69.760	61.305	56.230	52.850	50.435	48.625	47.215	46.085	45.165	44.395	43.745	43.185	42.705	42.280	41.910	41.575	41.280	41.015	40.770	40.550	40.350	40.170	40.000	39.840	39.700	39.565	39.440	39.320	Term. 2/
L. H. 3/	.47514	.32286	.24672	.20103	.17057	.14882	.13250	.11981	.10966	.10135	.09443	.08857	.08355	.07920	.07540	.07204	.06905	.06638	.06398	.06180	.05982	.05802	.05636	.05484	.05343	.05213	.05092	.04980	.04875	L. H. 3/

1/ Based on a tare weight of 22.5 tons and a ratio of empty car miles to loaded car miles of 0.351. The Less-carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.22.

For Cost Level III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.32.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Territory No. 12 - Total United States

BOX CARS

5101

TABLE 78.--TERRITORY NO. 12 - TOTAL UNITED STATES

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	19.5	16.3	14.0	12.2	10.9	9.8	8.9	8.2	7.6	7.0	6.6	6.2	5.8	5.5	5.2	4.9	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	10
20	20.5	17.1	14.7	12.8	11.4	10.3	9.4	8.6	8.0	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.1	20
30	21.4	17.9	15.3	13.5	12.0	10.8	9.8	9.0	8.4	7.8	7.3	6.8	6.4	6.1	5.8	5.5	5.3	5.0	4.8	4.6	4.5	4.3	4.1	4.0	3.9	3.8	3.6	3.5	3.4	3.3	30
40	22.3	18.6	16.0	14.1	12.5	11.3	10.3	9.5	8.8	8.2	7.6	7.2	6.8	6.4	6.1	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.7	3.6	3.5	40
50	23.2	19.4	16.7	14.7	13.1	11.8	10.8	9.9	9.2	8.5	8.0	7.5	7.1	6.7	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.1	3.9	3.8	3.7	50
60	24.2	20.2	17.4	15.3	13.6	12.3	11.2	10.3	9.6	8.9	8.4	7.9	7.4	7.0	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.0	3.9	60
70	25.1	21.0	18.1	15.9	14.2	12.8	11.7	10.8	10.0	9.3	8.7	8.2	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.6	5.4	5.3	5.1	4.9	4.8	4.6	4.5	4.4	4.2	4.1	70
80	26.0	21.8	18.7	16.5	14.7	13.3	12.1	11.2	10.4	9.7	9.1	8.5	8.1	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.5	4.3	80
90	26.9	22.6	19.4	17.1	15.3	13.8	12.6	11.6	10.8	10.1	9.4	8.9	8.4	8.0	7.6	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	4.7	4.5	90
100	27.9	23.3	20.1	17.7	15.8	14.3	13.1	12.0	11.2	10.4	9.8	9.2	8.7	8.3	7.9	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.9	4.7	100
120	29.7	24.9	21.5	18.9	16.9	15.3	14.0	12.9	12.0	11.2	10.5	9.9	9.4	8.9	8.5	8.1	7.8	7.4	7.2	6.9	6.7	6.4	6.2	6.0	5.9	5.7	5.5	5.4	5.3	5.1	120
140	31.5	26.5	22.8	20.1	18.0	16.3	14.9	13.8	12.8	11.9	11.2	10.6	10.0	9.5	9.1	8.7	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.1	6.0	5.8	5.7	5.5	140
160	33.4	28.0	24.2	21.3	19.1	17.5	15.8	14.6	13.6	12.7	11.9	11.3	10.7	10.1	9.7	9.3	8.9	8.5	8.2	7.9	7.6	7.4	7.2	7.0	6.8	6.6	6.4	6.2	6.1	5.9	160
180	35.2	29.6	25.6	22.5	20.2	18.5	16.8	15.5	14.4	13.5	12.7	11.9	11.3	10.8	10.3	9.8	9.4	9.1	8.7	8.4	8.1	7.9	7.6	7.4	7.2	7.0	6.8	6.7	6.5	6.3	180
200	37.1	31.2	26.9	23.7	21.3	19.3	17.7	16.3	15.2	14.2	13.4	12.6	12.0	11.4	10.9	10.4	10.0	9.6	9.2	8.9	8.6	8.4	8.1	7.9	7.6	7.4	7.2	7.1	6.9	6.7	200
220	38.9	32.7	28.3	25.0	22.4	20.3	18.6	17.2	16.0	15.0	14.1	13.3	12.6	12.0	11.5	11.0	10.5	10.1	9.8	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.3	7.1	220
240	40.8	34.3	29.8	26.2	23.5	21.3	19.5	18.0	16.8	15.7	14.8	14.0	13.3	12.6	12.1	11.6	11.1	10.7	10.3	9.9	9.6	9.3	9.0	8.8	8.5	8.3	8.1	7.9	7.7	7.5	240
260	42.6	35.9	31.0	27.4	24.6	22.3	20.4	18.9	17.6	16.5	15.5	14.7	13.9	13.3	12.7	12.1	11.6	11.2	10.8	10.4	10.1	9.8	9.5	9.2	9.0	8.7	8.5	8.3	8.1	7.9	260
280	44.5	37.4	32.4	28.6	25.6	23.3	21.4	19.8	18.4	17.2	16.2	15.4	14.6	13.9	13.3	12.7	12.2	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.4	9.2	8.9	8.7	8.5	8.3	280
300	46.3	39.0	33.7	29.8	26.7	24.3	22.3	20.6	19.2	18.0	17.0	16.0	15.2	14.5	13.9	13.3	12.8	12.3	11.8	11.4	11.1	10.7	10.4	10.1	9.9	9.6	9.4	9.1	8.9	8.7	300
320	48.2	40.5	35.1	31.0	27.8	25.3	23.2	21.5	20.0	18.8	17.7	16.7	15.9	15.1	14.5	13.9	13.3	12.8	12.4	11.9	11.6	11.2	10.9	10.6	10.3	10.0	9.8	9.6	9.3	9.1	320
340	50.0	42.1	36.5	32.2	28.9	26.3	24.1	22.3	20.8	19.5	18.4	17.4	16.5	15.7	15.1	14.4	13.9	13.4	12.9	12.5	12.1	11.7	11.4	11.0	10.7	10.5	10.2	10.0	9.8	9.5	340
360	51.9	43.7	37.8	33.4	30.0	27.3	25.1	23.2	21.6	20.3	19.1	18.1	17.2	16.4	15.7	15.0	14.4	13.9	13.4	13.0	12.5	12.2	11.8	11.5	11.2	10.9	10.6	10.4	10.2	9.9	360
380	53.7	45.2	39.2	34.6	31.1	28.3	26.0	24.1	22.4	21.0	19.8	18.8	17.8	17.0	16.2	15.6	15.0	14.4	13.9	13.5	13.0	12.6	12.3	11.9	11.6	11.3	11.1	10.8	10.6	10.3	380
400	55.6	46.8	40.5	35.9	32.2	29.3	26.9	24.9	23.2	21.8	20.5	19.4	18.5	17.6	16.8	16.2	15.5	15.0	14.4	14.0	13.5	13.1	12.7	12.4	12.1	11.8	11.5	11.2	11.0	10.7	400
420	57.4	48.4	41.9	37.1	33.3	30.3	27.8	25.8	24.0	22.5	21.2	20.1	19.1	18.2	17.4	16.7	16.1	15.5	15.0	14.5	14.0	13.6	13.2	12.9	12.5	12.2	11.9	11.6	11.4	11.1	420
440	59.3	49.9	43.3	38.3	34.4	31.3	28.7	26.6	24.8	23.3	22.0	20.8	19.8	18.9	18.0	17.3	16.6	16.0	15.5	15.0	14.5	14.1	13.7	13.3	13.0	12.6	12.3	12.1	11.8	11.5	440
460	61.1	51.5	44.6	39.5	35.5	32.3	29.7	27.5	25.6	24.1	22.7	21.5	20.4	19.5	18.6	17.9	17.2	16.6	16.0	15.5	15.0	14.6	14.3	13.8	13.4	13.1	12.8	12.5	12.2	11.9	460
480	62.9	53.1	46.0	40.7	36.6	33.3	30.6	28.3	26.4	24.8	23.4	22.2	21.1	20.1	19.2	18.5	17.7	17.1	16.5	16.0	15.5	15.0	14.6	14.2	13.9	13.5	13.2	12.9	12.6	12.3	480
500	64.8	54.6	47.4	41.9	37.7	34.3	31.5	29.2	27.2	25.5	24.1	22.8	21.7	20.7	19.8	19.0	18.3	17.6	17.0	16.5	16.0	15.5	15.1	14.7	14.3	13.9	13.6	13.3	13.0	12.7	500
600	74.0	62.4	54.2	48.0	43.1	39.3	36.1	33.5	31.3	29.4	27.7	26.2	25.0	23.8	22.8	21.9	21.1	20.3	19.6	19.0	18.4	17.9	17.4	16.9	16.5	16.1	15.7	15.4	15.1	14.8	600
700	83.3	70.3	61.0	54.0	48.6	44.3	40.7	37.8	35.3	33.1	31.3	29.7	28.2	26.9	25.8	24.8	23.9	23.0	22.2	21.5	20.9	20.3	19.7	19.2	18.7	18.3	17.9	17.5	17.1	16.8	700
800	92.5	78.1	67.8	60.1	54.1	49.3	45.3	42.1	39.3	36.9	34.9	33.1	31.5	30.1	28.8	27.7	26.6	25.7	24.8	24.1	23.3	22.7	22.1	21.5	20.9	20.4	20.0	19.5	19.1	18.8	800
900	101.7	85.9	74.6	66.1	59.5	54.3	50.0	46.4	43.3	40.7	38.4	36.5	34.7	33.2	31.8	30.5	29.4	28.4	27.4	26.6	25.8	25.1	24.4	23.7	23.2	22.6	22.1	21.6	21.2	20.8	900
1000	111.0	93.7	81.4	72.2	65.0	59.3	54.6	50.6	47.3	44.5	42.0	39.9	38.0	36.3	34.8	33.4	32.2	31.1	30.0	29.1	28.2	27.4	26.7	26.0	25.4	24.8	24.2	23.7	23.2	22.8	1000
1100	120.2	101.6	88.2	78.2	70.5	64.3	59.2	54.9	51.3	48.3	45.6	43.3	41.2	39.4	37.8	36.3	34.9	33.7	32.6	31.6	30.7	29.8	29.0	28.3	27.6	27.0	26.4	25.8	25.3	24.8	1100
1200	129.4	109.4	95.1	84.3	75.9	69.3	63.8	59.2	55.4	52.1	49.2	46.7	44.5	42.5	40.7	39.2	37.7	36.4	35.2	34.1	33.1	32.2	31.4	30.6	29.8	29.1	28.5	27.9	27.3	26.8	1200
1300	138.7	117.2	101.9	90.4	81.4	74.2	68.4	63.5	59.4	55.8	52.8	50.1	47.7	45.6	43.7	42.0	40.5	39.1	37.8	36.7	35.6	34.6	33.7	32.8	32.0	31.3	30.6	30.0	29.3	28.8	1300
1400	147.9	125.0	108.7	96.4	86.9	79.2	73.0	67.8	63.4	59.6	56.4	53.5	51.0	48.7	46.7	44.9	43.3	41.8	40.4	39.2	38.0	37.0	36.0	35.1	34.2	33.5	32.7	32.0	31.4	30.8	1400
1500	156.2	132.8	115.5	102.5	92.3	84.2	77.6	72.1	67.4	63.4	59.9	56.9	54.2	51.8	49.7	47.8	46.0	44.5	43.0	41.7	40.5	39.4	38.3	37.4	36.5	35.6	34.8	34.1	33.4	32.8	1500
1600	166.4	140.7	122.3	108.5	97.8	89.2	82.2	76.4	71.4	67.2	63.5	60.3	57.5	54.9	52.7	50.7	48.8	47.2	45.6	44.2	42.9	41.8	40.7	39.8	38.7	37.8	37.0	36.2	35.5	34.8	1600
1700	175.6	148.5	129.1	114.6	103.3	94.2	86.8	80.7	75.4	71.0	67.1	63.7	60.7	58.1	55.7	53.5	51.6	49.8	48.2	46.8	45.4	44.1	43.0	41.9	40.9	40.0	39.1	38.3	37.5	36.8	1700
1800	184.9	156.3	135.9	120.6	108.7	99.2	91.4	85.0	79.5	74.8	70.7	67.1	64.0	61.2	58.7	56.4	54.4	52.5	50.8	49.3	47.8	46.5	45.3	44.2	43.1	42.1	41.2	40.4	39.6	38.8	1800
1900	194.1	164.1	142.7	126.8	114.2	104.2	96.1	89.2	83.5	78.5	74.3	70.5	67.2	64.3	61.6	59.3	57.1	55.2	53.4	51.8	50.3	48.9	47.6	46.4	45.3	44.3	43.3	42.4	41.6	40.8	1900
2000	203.3	172.0	149.6	132.7	119.7	109.2	100.7	93.5	87.5	82.3	77.8	73.9	70.5	67.4	64.6	62.2	59.9	57.9	56.0	54.3	52.7	51.3	50.0	48.7	47.6	46.5	45.5	44.5	43.6	42.8	2000
2100	212.6	179.8	156.4	138.8	125.1	114.2	105.3	97.8	91.5	86.1	81.4	77.3	73.7	70.5	67.6	65.0	62.7	60.6	58.6	56.8	55.2	53.7	52.3	51.0	49.8	48.6	47.6	46.6	45.7	44.8	2100
2200	221.8	187.6	163.2	144.9	130.6	119.2	109.9	102.1	95.5	89.9	85.0	80.7	77.0	73.6	70.6	67.9	65.5	63.2	61.2	59.4	57.6	56.1	54.6	53.3	52.0	50.8	49.7	48.7	47.7	46.8	2200
2300	231.0	195.4	170.0	150.9	136.1	124.2	114.5	106.4	99.5	93.7	88.6	84.1	80.2	76.7	73.6	70.8	68.2	65.9	63.8	61.9	60.1	58.5	56.9	55.5	54.2	53.0	51.8	50.8	49.7	48.8	2300
2400	240.3	203.3	176.8	157.0	141.5	129.2	119.1	110.7	103.6	97.5	92.2	87.5	83.5	79.8	76.6	73.7	71.0	68.6	66.4	64.4	62.6	60.8	59.3	57.8	56.4	55.1	54.0	52.8	51.8	50.8	2400
2500	249.5	211.1	183.6	163.0	147.0	134.2	123.7	115.0	107.6	101.2	95.8	90.9	86.7	82.9	79.6	76.5	73.8	71.3	69.0	66.9	65.0	63.2	61.6	60.1	58.6	57.3	56.1	54.9	53.8	52.8	2500
2600	258.8	218.9	190.4	169.1	152.5	139.2	128.3	119.3	111.6	105.0	99.3	94.4	90.0	86.1	82.6	79.4	76.6	74.0	71.6	69.4	67.5	65.6	63.9	62.3	60.9	59.5	58.2	57.0	55.9	54.8	2600
2700	268.0	226.7	197.2	175.1	157.9	144.2	132.9	123.6	115.6	108.8	102.9	97.8	93.2	89.2	85.5	82.3	79.3	76.7	74.2	72.0	69.9	68.0	66.2	64.6	63.1	61.7	60.3	59.1	57.9	56.8	2700
2800	277.2	234.5	204.1	181.2	163.4	149.2	137.5	127.8	119.6	112.6	106.5	101.2	96.5	92.3	88.5	85.2	82.1	79.3	76.8	74.5	72.4	70.4	68.6	66.9	65.3	63.8	62.4	61.2	59.9	58.8	2800
2900	286.5	242.4	210.9	187.2	168.9	154.2	142.2	132.1	123.6	116.4	110.1	104.6	99.7	95.4	91.5	88.0	84.9	82.0	79.4	77.0	74.8	72.8	70.9	69.1	67.5	66.0	64.6	63.2	62.0	60.8	2900
3000	295.7	250.2	217.7	193.3	174.3	159.2	146.8	136.4	127.7	120.2	113.7	108.0	103.0	98.5	94.5	90.9	87.7	84.7	82.0	79.5	77.3	75.2	73.2	71.4	69.7	68.2	66.7	65.3	64.0	62.8	3000
3100	304.9	258.0	224.5	199.4	179.8	164.2	151.4	140.7	131.7	123.9	117.2	111.4	106.2	101.6	97.5	93.8	90.4	87.4	84.6	82.1	79.7	77.5	75.5	73.7	71.9	70.3	68.8	67.4	66.1	64.8	3100
3200	314.2	265.8	231.3	205.4	185.3	169.2	156.0	145.0	135.7	127.7	120.8	114.8	109.5	104.7	100.5	96.7	93.2	90.1	87.2	84.6	82.2	79.9	77.9	75.9	74.2	72.5	70.9	69.5	68.1	66.8	3200
3300	323.4	273.7	238.1	211.5	190.7	174.2	160.6	149.3	139.7	131.5	124.4	118.2	112.7	107.8	103.5	99.5	96.0	92.8	89.8	87.1	84.6	82.3	80.2	78.2	76.4	74.7	73.1	71.6	70.1	68.8	3300
3400	332.6	281.5	244.9	217.5	196.2	179.2	165.2	153.6	143.7	135.3	128.0	121.6	116.0	110.9	106.4	102.4	98.8	95.4	92.4	89.6	87.1	84.7	82.5	80.5	78.6	76.8	75.2	73.6	72.2	70.8	3400
3500	341.9	289.3	251.7	223.6	201.7	184.1	169.8	157.9	147.8	139.1	131.6	125.0	119.2	114.0	109.4	105.3	101.5	98.1	95.0	92.1	89.5	87.1	84.8	82.8	80.8	79.0	77.3	75.7	74.2	72.8	3500
Term. 2/	18.614	15.512	13.296	11.634	10.341	9.307	8.461	7.756	7.159	6.648	6.205	5.817	5.475	5.171	4.898	4.654	4.432	4.230	4.047	3.878	3.723	3.580	3.447	3.324	3.209	3.102	3.002	2.908	2.820	2.737	Term. 2/
L. H. 3/	.092360	.078225	.068129	.060556	.054667	.049955	.046100	.042888	.040169	.037839	.035820	.034053	.032494	.031108	.029868	.028753	.027743	.026825	.025987	.025219	.024512	.023860	.023256	.022695	.022172	.021685	.021229	.020802	.020400	.020022	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.335. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 78 (Concluded).--TERRITORY NO. 12 - TOTAL UNITED STATES

CARLOAD COST SCALES FOR COMMODITIES MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.9	2.8	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	10
20	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	20
30	3.2	3.2	3.1	3.0	2.9	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	30
40	3.4	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	40
50	3.6	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	50
60	3.8	3.7	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	60
70	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	70
80	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.6	80
90	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.8	2.7	2.7	90
100	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.9	2.9	100
120	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	120
140	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3.4	140
160	5.8	5.7	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	160
180	6.2	6.1	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	180
200	6.6	6.5	6.3	6.2	6.1	6.0	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	200
220	7.0	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.6	4.6	220
240	7.4	7.2	7.1	6.9	6.8	6.7	6.6	6.5	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	240
260	7.8	7.6	7.5	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.1	260
280	8.2	8.0	7.8	7.7	7.5	7.4	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	5.4	5.4	280
300	8.6	8.4	8.2	8.1	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.8	5.7	300
320	9.0	8.8	8.6	8.4	8.3	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.2	6.1	6.0	6.0	320
340	9.3	9.2	9.0	8.8	8.6	8.5	8.4	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	6.3	6.3	340
360	9.7	9.5	9.4	9.2	9.0	8.9	8.7	8.6	8.4	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.7	6.7	6.6	6.6	360
380	10.1	9.9	9.7	9.6	9.4	9.2	9.1	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	7.0	6.9	6.8	380
400	10.5	10.3	10.1	9.9	9.8	9.6	9.4	9.3	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.3	7.3	7.2	7.1	400
420	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.6	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	7.7	7.6	7.5	7.5	7.4	420
440	11.3	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.1	8.0	7.9	7.8	7.8	7.7	440
460	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.9	9.7	9.6	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	8.0	8.0	460
480	12.1	11.9	11.6	11.4	11.2	11.0	10.9	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.7	9.6	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.7	8.6	8.5	8.4	8.3	8.3	480
500	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.1	10.0	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	8.8	8.7	8.6	8.5	500
600	14.5	14.2	13.9	13.7	13.4	13.2	13.0	12.8	12.6	12.4	12.3	12.1	11.9	11.8	11.6	11.5	11.3	11.2	11.1	11.0	10.8	10.7	10.6	10.5	10.4	10.3	10.2	10.1	10.0	10.0	600
700	16.4	16.1	15.8	15.5	15.3	15.0	14.8	14.6	14.4	14.1	13.9	13.8	13.6	13.4	13.2	13.1	12.9	12.8	12.6	12.5	12.4	12.2	12.1	12.0	11.9	11.8	11.7	11.6	11.5	11.4	700
800	18.4	18.0	17.7	17.4	17.1	16.8	16.6	16.3	16.1	15.9	15.6	15.4	15.2	15.0	14.9	14.7	14.5	14.4	14.2	14.0	13.9	13.8	13.6	13.5	13.4	13.2	13.1	13.0	12.9	12.8	800
900	20.4	20.0	19.6	19.3	19.0	18.7	18.4	18.1	17.8	17.6	17.3	17.1	16.9	16.7	16.5	16.3	16.1	15.9	15.8	15.6	15.4	15.3	15.1	15.0	14.8	14.7	14.6	14.5	14.3	14.2	900
1000	22.3	21.9	21.5	21.2	20.8	20.5	20.2	19.9	19.6	19.3	19.0	18.8	18.6	18.3	18.1	17.9	17.7	17.5	17.3	17.1	17.0	16.8	16.6	16.5	16.3	16.2	16.0	15.9	15.8	15.6	1000
1100	24.3	23.8	23.4	23.0	22.7	22.3	22.0	21.6	21.3	21.0	20.7	20.5	20.2	20.0	19.7	19.5	19.3	19.1	18.9	18.7	18.5	18.3	18.1	18.0	17.8	17.6	17.5	17.3	17.2	17.0	1100
1200	26.3	25.8	25.3	24.9	24.5	24.1	23.7	23.4	23.1	22.7	22.4	22.1	21.9	21.6	21.3	21.1	20.9	20.6	20.4	20.2	20.0	19.8	19.6	19.4	19.3	19.1	18.9	18.8	18.6	18.5	1200
1300	28.2	27.7	27.2	26.8	26.3	25.9	25.5	25.2	24.8	24.5	24.1	23.8	23.5	23.2	23.0	22.7	22.4	22.2	22.0	21.7	21.5	21.3	21.1	20.9	20.7	20.6	20.4	20.2	20.0	19.9	1300
1400	30.2	29.6	29.1	28.6	28.2	27.7	27.3	26.9	26.5	26.2	25.8	25.5	25.2	24.9	24.6	24.3	24.0	23.8	23.5	23.3	23.1	22.8	22.6	22.4	22.2	22.0	21.8	21.6	21.5	21.3	1400
1500	32.2	31.6	31.0	30.5	30.0	29.6	29.1	28.7	28.3	27.9	27.5	27.2	26.8	26.5	26.2	25.9	25.6	25.3	25.1	24.8	24.6	24.3	24.1	23.9	23.7	23.5	23.3	23.1	22.9	22.7	1500
1600	34.1	33.5	32.9	32.4	31.9	31.4	30.9	30.4	30.0	29.6	29.2	28.9	28.5	28.2	27.8	27.5	27.2	26.9	26.6	26.4	26.1	25.9	25.6	25.4	25.2	24.9	24.7	24.5	24.3	24.1	1600
1700	36.1	35.4	34.8	34.3	33.7	33.2	32.7	32.2	31.8	31.3	30.9	30.5	30.2	29.8	29.4	29.1	28.8	28.5	28.2	27.9	27.6	27.4	27.1	26.9	26.6	26.4	26.2	26.0	25.8	25.6	1700
1800	38.1	37.4	36.7	36.1	35.5	35.0	34.5	34.0	33.5	33.1	32.6	32.2	31.8	31.4	31.1	30.7	30.4	30.1	29.7	29.4	29.2	28.9	28.6	28.4	28.1	27.9	27.6	27.4	27.2	27.0	1800
1900	40.0	39.3	38.6	38.0	37.4	36.8	36.3	35.7	35.2	34.8	34.3	33.9	33.5	33.1	32.7	32.3	32.0	31.6	31.3	31.0	30.7	30.4	30.1	29.8	29.6	29.3	29.1	28.8	28.6	28.4	1900
2000	42.0	41.2	40.5	39.9	39.2	38.6	38.1	37.5	37.0	36.5	36.0	35.5	35.1	34.7	34.3	33.9	33.6	33.2	32.9	32.5	32.2	31.9	31.6	31.3	31.1	30.8	30.5	30.3	30.0	29.8	2000
2100	44.0	43.2	42.4	41.7	41.1	40.4	39.8	39.3	38.7	38.2	37.7	37.2	36.8	36.3	35.9	35.5	35.1	34.8	34.4	34.1	33.7	33.4	33.1	32.8	32.5	32.2	32.0	31.7	31.5	31.2	2100
2200	45.9	45.1	44.3	43.6	42.9	42.3	41.6	41.0	40.5	39.9	39.4	38.9	38.4	38.0	37.5	37.1	36.7	36.3	36.0	35.6	35.3	34.9	34.6	34.3	34.0	33.7	33.4	33.2	32.9	32.6	2200
2300	47.9	47.0	46.2	45.5	44.8	44.1	43.4	42.8	42.2	41.6	41.1	40.6	40.1	39.6	39.2	38.7	38.3	37.9	37.5	37.2	36.8	36.4	36.1	35.8	35.5	35.2	34.9	34.6	34.3	34.1	2300
2400	49.9	49.0	48.1	47.4	46.6	45.9	45.2	44.6	44.0	43.4	42.8	42.3	41.8	41.3	40.8	40.3	39.9	39.5	39.1	38.7	38.3	38.0	37.6	37.3	36.9	36.6	36.3	36.0	35.8	35.5	2400
2500	51.8	50.9	50.0	49.2	48.4	47.7	47.0	46.3	45.7	45.1	44.5	43.9	43.4	42.9	42.4	41.9	41.5	41.1	40.6	40.2	39.8	39.5	39.1	38.8	38.4	38.1	37.8	37.5	37.2	36.9	2500
2600	53.8	52.8	51.9	51.1	50.3	49.5	48.8	48.1	47.4	46.8	46.2	45.6	45.1	44.5	44.0	43.5	43.1	42.6	42.2	41.8	41.4	41.0	40.6	40.2	39.9	39.6	39.2	38.9	38.6	38.3	2600
2700	55.8	54.8	53.8	53.0	52.1	51.3	50.6	49.9	49.2	48.5	47.9	47.3	46.7	46.2	45.6	45.1	44.7	44.2	43.7	43.3	42.9	42.5	42.1	41.7	41.4	41.0	40.7	40.4	40.0	39.7	2700
2800	57.7	56.7	55.7	54.8	54.0	53.1	52.4	51.6	50.9	50.2	49.6	49.0	48.4	47.8	47.3	46.7	46.2	45.8	45.3	44.9	44.4	44.0	43.6	43.2	42.8	42.5	42.1	41.8	41.5	41.1	2800
2900	59.7	58.6	57.6	56.7	55.8	55.0	54.2	53.4	52.7	52.0	51.3	50.7	50.0	49.5	48.9	48.4	47.8	47.3	46.9	46.4	45.9	45.5	45.1	44.7	44.3	43.9	43.6	43.2	42.9	42.6	2900
3000	61.7	60.6	59.5	58.6	57.7	56.8	55.9	55.2	54.4	53.7	53.0	52.3	51.7	51.1	50.5	50.0	49.4	48.9	48.4	47.9	47.5	47.0	46.6	46.2	45.8	45.4	45.0	44.7	44.3	44.0	3000
3100	63.6	62.5	61.4	60.4	59.5	58.6	57.7	56.9	56.1	55.4	54.7	54.0	53.4	52.7	52.1	51.6	51.0	50.5	50.0	49.5	49.0	48.5	48.1	47.7	47.3	46.9	46.5	46.1	45.7	45.4	3100
3200	65.6	64.4	63.4	62.3	61.3	60.4	59.5	58.7	57.9	57.1	56.4	55.7	55.0	54.4	53.8	53.2	52.6	52.0	51.5	51.0	50.5	50.1	49.6	49.2	48.7	48.3	47.9	47.5	47.2	46.8	3200
3300	67.6	66.4	65.3	64.2	63.2	62.2	61.3	60.4	59.6	58.8	58.1	57.4	56.7	56.0	55.4	54.8	54.2	53.6	53.1	52.6	52.1	51.6	51.1	50.6	50.2	49.8	49.4	49.0	48.6	48.2	3300
3400	69.5	68.3	67.2	66.1	65.0	64.0	63.1	62.2	61.4	60.6	59.8	59.0	58.3	57.6	57.0	56.4	55.8	55.2	54.6	54.1	53.6	53.1	52.6	52.1	51.7	51.3	50.8	50.4	50.0	49.7	3400
3500	71.5	70.2	69.1	67.9	66.9	65.9	64.9	64.0	63.1	62.3	61.5	60.7	60.0	59.3	58.5	58.0	57.4	56.8	56.2	55.6	55.1	54.6	54.1	53.6	53.2	52.7	52.3	51.9	51.5	51.1	3500
Term. 2/	2.659	2.585	2.515	2.449	2.386	2.327	2.270	2.216	2.164	2.115	2.068	2.023	1.980	1.939	1.899	1.861	1.825	1.790	1.756	1.724	1.692	1.662	1.633	1.605	1.577	1.551	1.526	1.501	1.477	1.454	Term. 2/
L. H. 1/	.019666	.019329	.019011	.018709	.018423	.018151	.017893	.017646	.017412	.017188	.016973	.016768	.016573	.016384	.016204	.016031	.015865	.015705	.015551	.015403	.015260	.015122	.014989	.014861	.014737	.014618	.014502	.014390	.014281	.014176	L. H. 1/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.335. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 79.—TERRITORY NO. 12 - TOTAL UNITED STATES

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	19.7	16.4	14.1	12.3	11.0	9.9	9.0	8.2	7.6	7.1	6.6	6.2	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.2	4.0	3.8	3.7	3.6	3.5	3.3	3.2	3.1	3.0	3.0	10
20	20.7	17.3	14.9	13.0	11.6	10.4	9.5	8.7	8.1	7.6	7.0	6.6	6.2	5.8	5.6	5.3	5.1	4.8	4.6	4.4	4.3	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2	20
30	21.8	18.2	15.6	13.7	12.2	11.0	10.0	9.2	8.5	7.9	7.4	7.0	6.6	6.2	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	30
40	22.9	19.1	16.4	14.4	12.8	11.6	10.6	9.7	9.0	8.4	7.8	7.4	6.9	6.6	6.2	5.9	5.7	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.1	3.9	3.8	3.7	3.6	40
50	23.6	20.0	17.2	15.1	13.5	12.2	11.1	10.2	9.4	8.8	8.2	7.7	7.3	6.9	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.1	3.9	3.8	50
60	25.0	20.9	18.0	15.8	14.1	12.7	11.6	10.7	9.9	9.2	8.6	8.1	7.7	7.3	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.1	60
70	26.0	21.8	18.8	16.5	14.7	13.3	12.1	11.2	10.3	9.6	9.0	8.5	8.0	7.6	7.2	6.9	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.1	4.9	4.8	4.6	4.5	4.4	4.3	70
80	27.1	22.7	19.5	17.2	15.3	13.8	12.7	11.6	10.8	10.1	9.4	8.9	8.4	8.0	7.6	7.2	6.9	6.6	6.4	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.7	4.6	4.5	80
90	28.2	23.6	20.3	17.9	16.0	14.4	13.2	12.1	11.3	10.5	9.8	9.3	8.8	8.3	7.9	7.6	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.8	4.7	90
100	29.2	24.5	21.1	18.6	16.6	15.0	13.7	12.6	11.7	10.9	10.2	9.7	9.1	8.7	8.2	7.9	7.5	7.2	6.9	6.7	6.5	6.2	6.0	5.8	5.7	5.5	5.3	5.2	5.0	4.9	100
120	31.4	26.3	22.7	19.9	17.8	16.1	14.7	13.6	12.6	11.8	11.1	10.4	9.9	9.4	8.9	8.5	8.2	7.8	7.5	7.3	7.0	6.8	6.5	6.3	6.2	6.0	5.8	5.7	5.6	5.4	120
140	33.5	28.1	24.2	21.3	19.1	17.3	15.8	14.6	13.5	12.6	11.9	11.2	10.6	10.1	9.6	9.2	8.8	8.4	8.1	7.8	7.5	7.3	7.1	6.9	6.8	6.6	6.4	6.3	6.1	6.0	140
160	35.6	29.9	25.8	22.7	20.3	18.4	16.8	15.5	14.4	13.5	12.7	12.0	11.3	10.8	10.3	9.8	9.4	9.0	8.7	8.4	8.1	7.8	7.6	7.4	7.1	6.9	6.8	6.6	6.4	6.3	160
180	37.7	31.7	27.3	24.1	21.6	19.5	17.9	16.5	15.3	14.3	13.5	12.7	12.1	11.5	10.9	10.5	10.0	9.6	9.3	8.9	8.6	8.4	8.1	7.9	7.6	7.4	7.2	7.0	6.9	6.7	180
200	39.9	33.5	28.9	25.5	22.8	20.7	18.9	17.5	16.3	15.2	14.3	13.5	12.8	12.2	11.6	11.1	10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.4	8.1	7.9	7.7	7.5	7.3	7.1	200
220	42.0	35.3	30.5	26.9	24.1	21.8	20.0	18.5	17.2	16.1	15.1	14.3	13.5	12.9	12.1	11.7	11.3	10.8	10.4	10.1	9.7	9.4	9.1	8.9	8.6	8.4	8.2	8.0	7.8	7.6	220
240	44.1	37.1	32.0	28.2	25.3	23.0	21.0	19.4	18.1	16.9	15.9	15.0	14.2	13.6	12.9	12.4	11.9	11.4	11.0	10.6	10.3	9.9	9.6	9.4	9.1	8.9	8.6	8.4	8.2	8.0	240
260	46.2	38.8	33.6	29.6	26.6	24.1	22.1	20.4	19.0	17.8	16.7	15.8	15.0	14.3	13.6	13.0	12.5	12.0	11.6	11.2	10.8	10.5	10.2	9.9	9.6	9.3	9.1	8.9	8.7	8.5	260
280	48.3	40.6	35.1	31.0	27.8	25.2	23.1	21.4	19.9	18.6	17.5	16.6	15.7	15.0	14.3	13.7	13.1	12.6	12.2	11.7	11.4	11.0	10.7	10.4	10.1	9.8	9.6	9.4	9.1	8.9	280
300	50.5	42.4	36.7	32.4	29.0	26.4	24.2	22.4	20.8	19.5	18.3	17.3	16.4	15.7	15.0	14.3	13.7	13.2	12.7	12.3	11.9	11.5	11.2	10.9	10.6	10.3	10.0	9.8	9.6	9.4	300
320	52.6	44.2	38.3	33.8	30.3	27.5	25.2	23.3	21.7	20.3	19.1	18.1	17.2	16.4	15.6	15.0	14.4	13.8	13.3	12.9	12.5	12.1	11.7	11.4	11.1	10.8	10.5	10.3	10.0	9.8	320
340	54.7	46.0	39.8	35.2	31.5	28.6	26.3	24.3	22.6	21.2	20.0	18.9	17.9	17.1	16.3	15.6	15.0	14.4	13.9	13.4	13.0	12.6	12.2	11.9	11.6	11.3	11.0	10.7	10.5	10.2	340
360	56.8	47.8	41.4	36.5	32.8	29.8	27.3	25.3	23.5	22.0	20.8	19.6	18.6	17.8	17.0	16.2	15.6	15.0	14.5	14.0	13.5	13.1	12.7	12.4	12.0	11.7	11.4	11.2	10.9	10.7	360
380	59.0	49.6	42.9	37.9	34.0	30.9	28.4	26.2	24.4	22.9	21.6	20.4	19.4	18.5	17.6	16.9	16.2	15.6	15.1	14.6	14.1	13.7	13.3	12.9	12.5	12.2	11.9	11.6	11.4	11.1	380
400	61.1	51.4	44.5	39.3	35.3	32.1	29.4	27.2	25.4	23.8	22.4	21.2	20.1	19.2	18.3	17.5	16.8	16.2	15.6	15.1	14.6	14.2	13.8	13.4	13.0	12.7	12.4	12.1	11.8	11.6	400
420	63.2	53.2	46.1	40.7	36.5	33.2	30.5	28.2	26.3	24.6	23.2	21.9	20.8	19.9	19.0	18.2	17.5	16.8	16.2	15.7	15.2	14.7	14.3	13.9	13.5	13.2	12.9	12.6	12.3	12.0	420
440	65.3	55.0	47.6	42.1	37.8	34.3	31.5	29.2	27.2	25.5	24.0	22.7	21.6	20.5	19.6	18.8	18.1	17.4	16.8	16.2	15.7	15.2	14.8	14.4	14.0	13.7	13.3	13.0	12.7	12.4	440
460	67.5	56.8	49.2	43.5	39.0	35.5	32.6	30.1	28.1	26.3	24.8	23.5	22.3	21.2	20.3	19.5	18.7	18.0	17.4	16.8	16.3	15.8	15.3	14.9	14.5	14.1	13.8	13.5	13.2	12.9	460
480	69.6	58.6	50.7	44.9	40.3	36.6	33.6	31.1	29.0	27.2	25.6	24.2	23.0	21.9	21.0	20.1	19.3	18.6	18.0	17.4	16.8	16.3	15.8	15.4	15.0	14.6	14.3	13.9	13.6	13.3	480
500	71.7	60.4	52.3	46.2	41.5	37.7	34.7	32.1	29.9	28.0	26.4	25.0	23.8	22.6	21.7	20.8	20.0	19.2	18.5	17.9	17.4	16.8	16.4	15.9	15.5	15.1	14.7	14.4	14.1	13.8	500
600	82.3	69.4	60.1	53.2	47.8	43.4	39.9	36.9	34.5	32.3	30.5	28.8	27.4	26.1	25.0	24.0	23.1	22.2	21.4	20.7	20.1	19.5	18.9	18.4	17.9	17.5	17.1	16.7	16.3	16.0	600
700	92.4	78.3	67.9	60.1	54.0	49.1	45.1	41.8	39.0	36.6	34.6	32.7	31.1	29.6	28.4	27.2	26.2	25.2	24.3	23.5	22.8	22.1	21.5	20.9	20.4	19.9	19.4	19.0	18.6	18.2	700
800	103.6	87.3	75.7	67.0	60.2	54.8	50.4	46.7	43.5	40.9	38.5	36.5	34.7	33.1	31.7	30.4	29.3	28.2	27.2	26.4	25.5	24.8	24.1	23.5	22.9	22.3	21.8	21.3	20.8	20.4	800
900	114.2	96.3	83.5	73.9	66.5	60.5	55.6	51.5	48.1	45.1	42.6	40.4	38.4	36.6	35.1	33.6	32.4	31.2	30.1	29.2	28.3	27.4	26.7	26.0	25.3	24.7	24.1	23.6	23.1	22.6	900
1000	124.8	105.3	91.3	80.8	72.7	66.2	60.8	56.4	52.6	49.4	46.6	44.2	42.0	40.1	38.4	36.9	35.5	34.2	33.0	32.0	31.0	30.1	29.3	28.5	27.8	27.1	26.5	25.9	25.3	24.8	1000
1100	135.4	114.2	99.1	87.8	78.9	71.9	66.1	61.3	57.2	53.7	50.7	48.0	45.7	43.6	41.8	40.1	38.6	37.2	35.9	34.8	33.7	32.8	31.8	31.0	30.2	29.5	28.8	28.2	27.6	27.0	1100
1200	146.0	123.2	106.9	94.7	85.2	77.6	71.3	66.1	61.7	58.0	54.7	51.9	49.3	47.1	45.1	43.3	41.7	40.2	38.9	37.6	36.5	35.4	34.4	33.5	32.7	31.9	31.2	30.5	29.8	29.2	1200
1300	156.7	132.2	114.7	101.6	91.4	83.2	76.6	71.0	66.3	62.3	58.8	55.7	53.0	50.6	48.5	46.5	44.8	43.2	41.7	40.4	39.2	38.1	37.0	36.0	35.1	34.3	33.5	32.8	32.1	31.4	1300
1400	167.3	141.2	122.5	108.5	97.6	88.9	81.8	75.9	70.8	66.5	62.8	59.5	56.7	54.1	51.8	49.7	47.9	46.2	44.6	43.2	41.9	40.7	39.6	38.6	37.6	36.7	35.8	35.1	34.3	33.6	1400
1500	177.9	150.1	130.3	115.4	103.9	94.6	87.0	80.7	75.4	70.8	66.9	63.4	60.3	57.6	55.2	53.0	51.0	49.2	47.5	46.0	44.6	43.4	42.2	41.1	40.0	39.1	38.2	37.4	36.6	35.9	1500
1600	188.5	159.1	138.1	122.4	110.1	100.3	92.3	85.6	79.9	75.1	70.9	67.2	64.0	61.1	58.5	56.2	54.1	52.2	50.4	48.8	47.4	46.0	44.8	43.6	42.5	41.5	40.5	39.6	38.8	38.0	1600
1700	199.1	168.1	145.9	129.3	116.3	106.0	97.5	90.5	84.5	79.4	74.9	71.1	67.6	64.6	61.9	59.4	57.2	55.2	53.3	51.6	50.1	48.7	47.3	46.1	45.0	43.9	42.9	41.9	41.1	40.2	1700
1800	209.8	177.4	153.7	136.2	122.6	111.7	102.8	95.3	89.0	83.7	79.0	74.9	71.3	68.1	65.2	62.6	60.3	58.2	56.2	54.5	52.8	51.3	49.9	48.6	47.4	46.3	45.2	44.2	43.3	42.4	1800
1900	220.4	186.0	161.5	143.1	128.8	117.4	108.0	100.2	93.6	87.9	83.0	78.7	74.9	71.6	68.6	65.9	63.4	61.2	59.1	57.3	55.6	54.0	52.5	51.1	49.9	48.7	47.6	46.5	45.6	44.6	1900
2000	231.0	195.0	169.3	150.0	135.0	123.0	113.2	105.1	98.1	92.2	87.1	82.6	78.6	75.1	71.9	69.1	66.5	64.2	62.0	60.1	58.3	56.6	55.1	53.7	52.3	51.1	49.9	48.8	47.8	46.8	2000
2100	241.6	204.0	177.1	157.0	141.3	128.7	118.5	109.9	102.7	96.5	91.1	86.4	82.3	78.6	75.3	72.3	69.6	67.2	64.9	62.9	61.0	59.3	57.7	56.2	54.8	53.5	52.3	51.1	50.1	49.1	2100
2200	252.2	213.0	184.9	163.9	147.5	134.4	123.7	114.8	107.2	100.8	95.2	90.2	85.9	82.1	78.6	75.5	72.7	70.2	67.8	65.7	63.7	61.9	60.2	58.7	57.2	55.9	54.6	53.4	52.3	51.3	2200
2300	262.9	221.9	192.7	170.8	153.7	140.1	128.9	119.7	111.8	105.0	99.2	94.1	89.6	85.6	82.0	78.7	75.8	73.2	70.7	68.5	66.5	64.6	62.8	61.2	59.7	58.3	57.0	55.8	54.6	53.6	2300
2400	273.5	230.9	200.5	177.7	160.0	145.8	134.2	124.5	116.3	109.3	103.2	97.9	93.2	89.1	85.3	82.0	78.9	76.2	73.6	71.3	69.3	67.2	65.4	63.7	62.1	60.7	59.3	58.0	56.8	55.7	2400
2500	284.1	239.9	208.3	184.6	166.2	151.5	139.4	129.4	120.9	113.6	107.3	101.8	96.9	92.5	88.7	85.2	82.0	79.2	76.5	74.1	71.9	69.9	68.0	66.2	64.6	63.1	61.7	60.3	59.1	57.9	2500
2600	294.7	248.9	216.1	191.6	172.5	157.2	144.7	134.2	125.4	117.9	111.3	105.6	100.5	96.0	92.0	88.4	85.1	82.1	79.4	76.9	74.6	72.5	70.6	68.8	67.1	65.5	64.0	62.6	61.3	60.1	2600
2700	305.3	257.8	223.9	198.5	178.7	162.9	149.9	139.1	130.0	122.2	115.4	109.4	104.2	99.5	95.4	91.6	88.2	85.1	82.3	79.7	77.4	75.2	73.2	71.3	69.5	67.8	66.3	64.9	63.6	62.3	2700
2800	315.9	266.8	231.7	205.4	184.9	168.5	155.1	144.0	134.5	126.4	119.4	113.3	107.8	103.0	98.7	94.8	91.3	88.1	85.2	82.6	80.1	77.8	75.7	73.8	72.0	70.3	68.7	67.2	65.8	64.5	2800
2900	326.6	275.8	239.5	212.3	191.2	174.2	160.4	148.8	139.1	130.7	123.5	117.1	111.5	106.5	102.1	98.1	94.4	91.1	88.1	85.4	82.8	80.5	78.3	76.3	74.4	72.7	71.0	69.5	68.1	66.7	2900
3000	337.2	284.8	247.3	219.2	197.4	179.9	165.6	153.7	143.6	135.0	127.5	120.9	115.2	110.0	105.4	101.3	97.5	94.1	91.0	88.2	85.6	83.1	80.9	78.8	76.9	75.1	73.4	71.8	70.3	68.9	3000
3100	347.8	293.7	255.1	226.2	203.6	185.6	170.9	158.6	148.2	139.3	131.5	124.8	118.9	113.5	108.8	104.5	100.6	97.1	93.9	91.0	88.3	85.8	83.5	81.3	79.3	77.5	75.7	74.1	72.6	71.1	3100
3200	358.4	302.7	262.9	233.1	209.9	191.3	176.1	163.4	152.7	143.5	135.6	128.6	122.5	117.0	112.1	107.7	103.7	100.1	96.8	93.9	91.0	88.4	86.1	83.8	81.8	79.9	78.1	76.4	74.8	73.3	3200
3300	369.0	311.7	270.7	240.0	216.1	197.0	181.3	168.3	157.3	147.8	139.6	132.5	126.1	120.5	115.5	110.9	106.9	103.1	99.7	96.6	93.7	91.1	88.6	86.4	84.2	82.3	80.4	78.7	77.1	75.5	3300
3400	379.7	320.7	278.5	246.9	222.3	202.7	186.6	173.2	161.8	152.1	143.7	136.3	129.8	124.0	118.8	114.2	110.0	106.1	102.6	99.4	96.5	93.7	91.2	88.9	86.7	84.7	82.8	81.0	79.3	77.7	3400
3500	390.3	329.6	286.3	253.8	228.6	208.4	191.8	178.0	166.4	156.4	147.7	140.1	133.4	127.5	122.2	117.4	113.1	109.1	105.5	102.2	99.2	96.4	93.8	91.4	89.2	87.1	85.1	83.3	81.6	79.9	3500
Term. 2/	18.514	15.512	13.296	11.634	10.341	9.307	8.461	7.756	7.159	6.648	6.205	5.817	5.475	5.171	4.898	4.654	4.432	4.230	4.047	3.878	3.723	3.580	3.447	3.324	3.209	3.102	3.002	2.909	2.820	2.737	Term. 2/
L. H. 3/	.106190	.089750	.078007	.069200	.062350	.056870	.052386	.048650	.045488	.042779	.040430	.038375	.036562	.034950	.033508	.032210	.031036	.029968	.028993	.028100	.027278	.026519	.025817	.025164	.024557	.023990	.023460	.022963	.022495	.022056	L. H. 3/

1/ Based on a tare weight of 18.1 tons and a ratio of empty car miles to loaded car miles of 0.746. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 79 (Concluded).--TERRITORY NO. 12 - TOTAL UNITED STATES

CARLOAD COST SCALES FOR COMMODITIES MOVING IN FLAT CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	10
20	3.1	3.0	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	20
30	3.4	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	30
40	3.6	3.4	3.4	3.3	3.2	3.1	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.6	2.6	2.6	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	40
50	3.7	3.6	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	50
60	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	60
70	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5	2.5	70
80	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.8	2.7	2.7	2.7	80
90	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.8	90
100	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	100
120	5.1	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	120
140	5.7	5.6	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.7	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	140
160	6.1	6.0	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	160
180	6.6	6.4	6.3	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	180
200	7.0	6.8	6.7	6.6	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.7	4.6	4.6	4.5	200
220	7.4	7.3	7.1	7.0	6.8	6.7	6.6	6.5	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.0	5.0	4.9	4.9	4.8	220
240	7.9	7.7	7.5	7.4	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.3	5.2	5.2	5.1	240
260	8.3	8.1	7.9	7.8	7.6	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.7	5.6	5.5	5.5	5.4	260
280	8.7	8.5	8.4	8.2	8.0	7.8	7.8	7.6	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.8	5.7	280
300	9.2	9.0	8.8	8.6	8.4	8.3	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.2	6.1	6.0	6.0	300
320	9.6	9.4	9.2	9.0	8.8	8.7	8.5	8.4	8.3	8.1	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.5	6.4	6.3	320
340	10.0	9.8	9.6	9.4	9.3	9.1	8.9	8.8	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.8	6.8	6.7	6.6	340
360	10.4	10.2	10.0	9.8	9.7	9.5	9.3	9.2	9.0	8.9	8.7	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0	6.9	360
380	10.9	10.7	10.4	10.3	10.1	9.9	9.7	9.5	9.4	9.2	9.1	9.0	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.5	7.4	7.3	7.3	380
400	11.3	11.1	10.9	10.7	10.5	10.3	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7	7.6	7.6	400
420	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.6	9.4	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.3	8.2	8.1	8.0	7.9	7.9	420
440	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.2	440
460	12.6	12.4	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.6	8.5	460
480	13.0	12.8	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.1	11.0	10.8	10.6	10.5	10.4	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9	8.8	480
500	13.5	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.2	10.1	10.0	9.8	9.7	9.6	9.5	9.4	9.3	9.3	9.2	9.1	500
600	15.6	15.3	15.0	14.8	14.5	14.3	14.0	13.8	13.6	13.4	13.2	13.0	12.8	12.6	12.5	12.3	12.2	12.0	11.9	11.7	11.6	11.5	11.4	11.2	11.1	11.0	10.9	10.8	10.7	10.6	600
700	17.8	17.5	17.1	16.8	16.5	16.2	16.0	15.7	15.5	15.2	15.0	14.8	14.6	14.4	14.2	14.1	13.9	13.7	13.6	13.4	13.3	13.1	13.0	12.8	12.7	12.6	12.5	12.4	12.2	12.1	700
800	20.0	19.6	19.2	18.9	18.5	18.2	17.9	17.7	17.4	17.1	16.9	16.6	16.4	16.2	16.0	15.8	15.6	15.4	15.2	15.1	14.9	14.7	14.6	14.4	14.3	14.2	14.0	13.9	13.8	13.7	800
900	22.1	21.7	21.3	20.9	20.6	20.2	19.9	19.6	19.3	19.0	18.7	18.5	18.2	18.0	17.8	17.6	17.3	17.1	16.9	16.7	16.6	16.4	16.2	16.1	15.9	15.8	15.6	15.5	15.3	15.2	900
1000	24.1	23.8	23.4	23.0	22.6	22.2	21.8	21.5	21.2	20.9	20.6	20.3	20.0	19.8	19.5	19.3	19.0	18.8	18.6	18.4	18.2	18.0	17.8	17.7	17.5	17.3	17.2	17.0	16.9	16.7	1000
1100	26.5	26.0	25.5	25.0	24.6	24.2	23.8	23.4	23.1	22.7	22.4	22.1	21.8	21.5	21.3	21.0	20.8	20.5	20.3	20.1	19.9	19.7	19.5	19.3	19.1	18.9	18.7	18.6	18.4	18.2	1100
1200	28.6	28.1	27.6	27.1	26.6	26.2	25.8	25.4	25.0	24.6	24.3	23.9	23.6	23.3	23.0	22.8	22.5	22.2	22.0	21.7	21.5	21.3	21.1	20.9	20.7	20.5	20.3	20.1	19.9	19.8	1200
1300	30.8	30.2	29.7	29.1	28.6	28.2	27.7	27.3	26.9	26.5	26.1	25.8	25.4	25.1	24.8	24.5	24.2	23.9	23.7	23.4	23.2	22.9	22.7	22.5	22.3	22.1	21.9	21.7	21.5	21.3	1300
1400	33.0	32.3	31.7	31.2	30.7	30.2	29.7	29.2	28.8	28.4	28.0	27.6	27.2	26.9	26.6	26.2	25.9	25.6	25.4	25.1	24.8	24.6	24.3	24.1	23.8	23.6	23.4	23.2	23.0	22.8	1400
1500	35.1	34.5	33.8	33.2	32.7	32.1	31.6	31.2	30.7	30.3	29.8	29.4	29.0	28.7	28.3	28.0	27.7	27.3	27.0	26.7	26.5	26.2	25.9	25.7	25.4	25.2	25.0	24.8	24.5	24.3	1500
1600	37.3	36.6	35.9	35.3	34.7	34.1	33.6	33.1	32.6	32.1	31.7	31.3	30.9	30.5	30.1	29.7	29.4	29.0	28.7	28.4	28.1	27.8	27.6	27.3	27.0	26.8	26.5	26.3	26.1	25.9	1600
1700	39.4	38.7	38.0	37.3	36.7	36.1	35.6	35.0	34.5	34.0	33.5	33.1	32.7	32.2	31.8	31.5	31.1	30.7	30.4	30.1	29.8	29.5	29.2	28.9	28.6	28.4	28.1	27.9	27.6	27.4	1700
1800	41.6	40.8	40.1	39.4	38.7	38.1	37.5	36.9	36.4	35.9	35.4	34.9	34.5	34.0	33.6	33.2	32.8	32.5	32.1	31.8	31.4	31.1	30.8	30.5	30.2	29.9	29.7	29.4	29.2	28.9	1800
1900	43.8	43.0	42.2	41.5	40.8	40.1	39.5	38.9	38.3	37.8	37.2	36.7	36.3	35.8	35.4	34.9	34.5	34.2	33.8	33.5	33.1	32.7	32.4	32.1	31.8	31.5	31.2	31.0	30.7	30.4	1900
2000	45.9	45.1	44.3	43.5	42.8	42.1	41.4	40.8	40.2	39.6	39.1	38.6	38.1	37.6	37.1	36.7	36.3	35.9	35.5	35.1	34.7	34.4	34.0	33.7	33.4	33.1	32.8	32.5	32.2	32.0	2000
2100	48.1	47.2	46.4	45.6	44.8	44.1	43.4	42.7	42.1	41.5	40.9	40.4	39.9	39.4	38.9	38.4	38.0	37.6	37.2	36.8	36.4	36.0	35.7	35.3	35.0	34.7	34.4	34.1	33.8	33.5	2100
2200	50.3	49.3	48.5	47.6	46.8	46.1	45.3	44.7	44.0	43.4	42.8	42.2	41.7	41.2	40.7	40.2	39.7	39.3	38.8	38.4	38.0	37.6	37.3	36.9	36.6	36.2	35.9	35.6	35.3	35.0	2200
2300	52.4	51.4	50.5	49.7	48.8	48.1	47.3	46.6	45.9	45.3	44.6	44.0	43.5	42.9	42.4	41.9	41.4	41.0	40.5	40.1	39.7	39.3	38.9	38.5	38.2	37.8	37.5	37.2	36.8	36.5	2300
2400	54.6	53.6	52.6	51.7	50.9	50.0	49.3	48.5	47.8	47.1	46.5	45.9	45.3	44.7	44.2	43.7	43.2	42.7	42.2	41.8	41.3	40.9	40.5	40.1	39.8	39.4	39.1	38.7	38.4	38.1	2400
2500	56.8	55.7	54.7	53.8	52.9	52.0	51.2	50.4	49.7	49.0	48.3	47.7	47.1	46.5	45.9	45.4	44.9	44.4	43.9	43.4	43.0	42.6	42.1	41.7	41.3	41.0	40.6	40.3	39.9	39.6	2500
2600	58.9	57.8	56.8	55.8	54.9	54.0	53.2	52.4	51.6	50.9	50.2	49.5	48.9	48.3	47.7	47.1	46.6	46.1	45.6	45.1	44.6	44.2	43.8	43.3	42.9	42.6	42.2	41.8	41.5	41.1	2600
2700	61.1	60.0	58.9	57.9	56.9	56.0	55.1	54.3	53.5	52.8	52.0	51.4	50.7	50.1	49.5	48.9	48.3	47.8	47.3	46.8	46.3	45.8	45.4	44.8	44.5	44.1	43.7	43.4	43.0	42.6	2700
2800	63.3	62.1	61.0	59.9	58.9	58.0	57.1	56.2	55.4	54.6	53.9	53.2	52.5	51.8	51.2	50.6	50.0	49.5	49.0	48.4	47.9	47.5	47.0	46.6	46.1	45.7	45.3	44.9	44.5	44.2	2800
2900	65.4	64.2	63.1	62.0	61.0	60.0	59.0	58.2	57.3	56.5	55.7	55.0	54.3	53.6	53.0	52.4	51.8	51.2	50.6	50.1	49.6	49.1	48.6	48.2	47.7	47.3	46.9	46.5	46.1	45.7	2900
3000	67.6	66.3	65.2	64.0	63.0	62.0	61.0	60.1	59.2	58.4	57.6	56.8	56.1	55.4	54.7	54.1	53.5	52.9	52.3	51.8	51.2	50.7	50.2	49.8	49.3	48.9	48.4	48.0	47.6	47.2	3000
3100	69.7	68.5	67.2	66.1	65.0	64.0	63.0	62.0	61.1	60.3	59.4	58.7	57.9	57.2	56.5	55.8	55.2	54.6	54.0	53.4	52.9	52.4	51.9	51.4	50.9	50.4	50.0	49.6	49.2	48.7	3100
3200	71.9	70.6	69.3	68.1	67.0	66.0	64.9	64.0	63.0	62.1	61.3	60.5	59.7	59.0	58.3	57.6	56.9	56.3	55.7	55.1	54.5	54.0	53.5	53.0	52.5	52.0	51.6	51.1	50.7	50.3	3200
3300	74.1	72.7	71.4	70.2	69.0	67.9	66.9	65.9	64.9	64.0	63.2	62.3	61.5	60.8	60.0	59.3	58.7	58.0	57.4	56.8	56.2	55.6	55.1	54.6	54.1	53.6	53.1	52.7	52.2	51.8	3300
3400	76.2	74.8	73.5	72.2	71.1	69.9	68.8	67.8	66.8	65.9	65.0	64.1	63.3	62.5	61.8	61.0	60.4	59.7	59.1	58.4	57.8	57.2	56.7	56.2	55.7	55.2	54.7	54.2	53.8	53.3	3400
3500	78.4	77.0	75.6	74.3	73.1	71.9	70.8	69.7	68.7	67.8	66.9	66.0	65.1	64.3	63.6	62.8	62.1	61.4	60.8	60.1	59.5	58.9	58.3	57.8	57.3	56.7	56.2	55.8	55.3	54.9	3500
Term. 2/	2.099	2.585	2.515	2.449	2.386	2.327	2.270	2.216	2.164	2.115	2.068	2.023	1.980	1.939	1.899	1.861	1.825	1.790	1.756	1.724	1.692	1.662	1.633	1.605	1.577	1.551	1.526	1.501	1.477	1.454	Term. 2/
L. H. 3/	.021941	.021250	.020680	.020529	.020196	.019880	.019579	.019293	.019020	.018759	.018510	.018272	.018044	.017825	.017615	.017414	.017221	.017035	.016856	.016683	.016517	.016357	.016203	.016053	.015909	.015770	.015635	.015505	.015379	.015256	L. H. 3/

1/ Based on a tare weight of 18.1 tons and a ratio of empty car miles to loaded car miles of 0.748. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the costs for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 83 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 12 - Total United States

GONDOLA AND HOPPER CARS

TABLE 80.—TERRITORY NO. 12 - TOTAL UNITED STATES

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	19.8	16.5	14.2	12.4	11.1	10.0	9.1	8.3	7.7	7.1	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	10
20	21.1	17.6	15.1	13.2	11.8	10.6	9.7	8.9	8.2	7.6	7.2	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	20
30	22.3	18.6	16.0	14.0	12.5	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.4	6.0	5.7	5.5	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	30
40	23.5	19.7	16.9	14.8	13.2	11.9	10.9	10.0	9.2	8.6	8.0	7.6	7.1	6.8	6.4	6.1	5.8	5.6	5.4	5.1	4.9	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	40
50	24.8	20.7	17.8	15.6	13.9	12.6	11.5	10.5	9.8	9.1	8.5	8.0	7.6	7.2	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.2	4.1	4.0	50
60	26.0	21.7	18.7	16.4	14.6	13.2	12.1	11.1	10.3	9.6	9.0	8.4	8.0	7.5	7.2	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.3	4.2	60
70	27.2	22.8	19.6	17.2	15.4	13.9	12.7	11.7	10.8	10.1	9.4	8.9	8.4	7.9	7.6	7.2	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.5	70
80	28.5	23.8	20.5	18.0	16.1	14.5	13.3	12.2	11.3	10.6	9.9	9.3	8.8	8.3	7.9	7.6	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	5.1	5.0	4.8	4.7	80
90	29.7	24.9	21.4	18.8	16.8	15.2	13.9	12.8	11.8	11.0	10.3	9.7	9.2	8.7	8.3	7.9	7.6	7.3	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	90
100	30.9	25.9	22.3	19.6	17.5	15.8	14.5	13.3	12.4	11.5	10.8	10.2	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.0	6.8	6.6	6.3	6.1	6.0	5.8	5.6	5.5	5.3	5.2	100
120	33.4	28.0	24.1	21.2	18.9	17.1	15.7	14.4	13.4	12.5	11.7	11.1	10.5	9.9	9.4	9.0	8.6	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.5	6.3	6.1	6.0	5.8	5.7	120
140	35.8	30.0	25.9	22.8	20.4	18.4	16.9	15.5	14.4	13.5	12.6	11.9	11.3	10.7	10.2	9.8	9.3	9.0	8.6	8.3	8.0	7.7	7.5	7.3	7.1	6.9	6.7	6.5	6.3	6.2	140
160	38.1	32.1	27.7	24.4	21.8	19.8	18.1	16.7	15.5	14.5	13.6	12.8	12.1	11.5	11.0	10.5	10.0	9.6	9.3	8.9	8.6	8.3	8.1	7.8	7.6	7.4	7.2	7.0	6.8	6.7	160
180	40.8	34.2	29.5	26.0	23.2	21.1	19.3	17.8	16.5	15.5	14.5	13.7	12.9	12.3	11.7	11.2	10.7	10.3	9.9	9.6	9.2	8.9	8.7	8.4	8.2	7.9	7.7	7.5	7.3	7.2	180
200	43.2	36.3	31.3	27.6	24.7	22.4	20.5	18.9	17.5	16.4	15.4	14.5	13.8	13.1	12.5	11.9	11.4	11.0	10.6	10.2	9.9	9.5	9.2	9.0	8.7	8.5	8.2	8.0	7.8	7.6	200
220	45.7	38.3	33.1	29.2	26.1	23.7	21.7	20.0	18.6	17.4	16.3	15.4	14.6	13.9	13.2	12.7	12.1	11.7	11.2	10.8	10.5	10.1	9.8	9.5	9.2	9.0	8.8	8.5	8.3	8.1	220
240	48.1	40.4	34.9	30.8	27.5	25.0	22.9	21.1	19.6	18.4	17.3	16.3	15.4	14.7	14.0	13.4	12.8	12.3	11.9	11.5	11.1	10.7	10.4	10.1	9.8	9.5	9.3	9.0	8.8	8.6	240
260	50.6	42.5	36.7	32.4	29.0	26.3	24.1	22.2	20.7	19.3	18.2	17.2	46.3	15.5	14.8	14.1	13.5	13.0	12.5	12.1	11.7	11.3	11.0	10.6	10.3	10.1	9.8	9.6	9.3	9.1	260
280	53.1	44.6	38.5	34.0	30.4	27.6	25.3	23.3	21.7	20.3	19.1	18.0	17.1	16.3	15.5	14.8	14.2	13.7	13.2	12.7	12.3	11.9	11.5	11.2	10.9	10.6	10.3	10.1	9.8	9.6	280
300	55.5	46.6	40.3	35.5	31.8	28.9	26.5	24.5	22.7	21.3	20.0	18.9	17.9	17.1	16.3	15.6	14.9	14.4	13.8	13.4	12.9	12.5	12.1	11.8	11.4	11.1	10.9	10.6	10.3	10.1	300
320	58.0	48.7	42.1	37.1	33.3	30.2	27.7	25.6	23.8	22.3	20.9	19.8	18.8	17.8	17.0	16.3	15.6	15.0	14.5	14.0	13.5	13.1	12.7	12.3	12.0	11.7	11.4	11.1	10.8	10.6	320
340	60.4	50.8	43.9	38.7	34.7	31.5	28.9	26.7	24.8	23.2	21.9	20.7	19.6	18.6	17.8	17.0	16.3	15.6	15.1	14.6	14.1	13.7	13.3	12.9	12.5	12.2	11.9	11.6	11.3	11.1	340
360	62.9	52.9	45.7	40.3	36.1	32.8	30.1	27.8	25.9	24.2	22.8	21.5	20.4	19.4	18.6	17.8	17.0	16.4	15.8	15.3	14.8	14.3	13.9	13.5	13.1	12.7	12.4	12.1	11.8	11.6	360
380	65.4	54.9	47.5	41.9	37.6	34.1	31.3	28.9	26.9	25.2	23.7	22.4	21.2	20.2	19.3	18.5	17.7	17.1	16.5	15.9	15.4	14.9	14.4	14.0	13.6	13.3	12.9	12.6	12.3	12.1	380
400	67.8	57.0	49.3	43.5	39.0	35.4	32.5	30.0	27.9	26.2	24.6	23.3	22.1	21.0	20.1	19.2	18.4	17.7	17.1	16.5	16.0	15.5	15.0	14.6	14.2	13.8	13.5	13.1	12.8	12.5	400
420	70.3	59.1	51.1	45.1	40.5	36.7	33.7	31.1	29.0	27.1	25.5	24.1	22.9	21.8	20.8	19.9	19.1	18.4	17.8	17.2	16.6	16.1	15.6	15.2	14.7	14.4	14.0	13.7	13.3	13.0	420
440	72.7	61.2	52.9	46.7	41.9	38.0	34.9	32.2	30.0	28.1	26.5	25.0	23.7	22.6	21.6	20.7	19.8	19.1	18.4	17.8	17.2	16.7	16.2	15.7	15.3	14.9	14.5	14.2	13.8	13.5	440
460	75.2	63.2	54.7	48.3	43.3	39.3	36.1	33.4	31.1	29.1	27.4	25.9	24.6	23.4	22.3	21.4	20.5	19.8	19.1	18.4	17.8	17.3	16.8	16.3	15.8	15.4	15.0	14.7	14.3	14.0	460
480	77.7	65.3	56.5	49.8	44.6	40.6	37.3	34.5	32.1	30.1	28.3	26.8	25.4	24.2	23.1	22.1	21.3	20.4	19.7	19.0	18.4	17.9	17.3	16.8	16.4	16.0	15.6	15.2	14.8	14.5	480
500	80.1	67.4	58.3	51.5	46.2	41.9	38.5	35.6	33.1	31.0	29.2	27.6	26.2	25.0	23.9	22.9	22.0	21.1	20.4	19.7	19.0	18.5	17.9	17.4	16.9	16.5	16.1	15.7	15.3	15.0	500
600	92.4	77.8	67.3	59.5	53.4	48.5	44.5	41.1	38.3	35.9	33.8	32.0	30.4	28.9	27.7	26.5	25.5	24.5	23.6	22.8	22.1	21.4	20.8	20.2	19.7	19.2	18.7	18.3	17.8	17.5	600
700	104.7	88.1	76.3	67.4	60.5	55.0	50.5	46.7	43.5	40.8	38.4	36.4	34.5	32.9	31.5	30.1	29.0	27.9	26.9	26.0	25.2	24.4	23.7	23.0	22.4	21.9	21.3	20.8	20.3	19.9	700
800	117.0	98.5	85.3	75.4	67.5	61.5	56.5	52.3	48.7	45.7	43.0	40.7	38.7	36.9	35.2	33.8	32.5	31.3	30.2	29.2	28.3	27.4	26.6	25.9	25.2	24.5	23.9	23.3	22.8	22.4	800
900	129.3	108.9	94.3	83.3	74.6	68.1	62.5	57.8	53.9	50.6	47.6	45.1	42.8	40.8	39.0	37.4	36.0	34.6	33.4	32.3	31.3	30.4	29.5	28.7	27.9	27.2	26.6	25.9	25.4	24.8	900
1000	141.6	119.3	103.3	91.3	82.0	74.6	68.5	63.4	59.1	55.4	52.2	49.4	47.0	44.8	42.8	41.1	39.5	38.0	36.7	35.5	34.4	33.3	32.4	31.5	30.7	29.9	29.2	28.5	27.9	27.3	1000
1100	153.9	129.6	112.3	99.3	89.2	81.1	74.5	69.0	64.3	60.3	56.8	53.8	51.1	48.8	46.6	44.7	43.0	41.4	40.0	38.6	37.4	36.3	35.3	34.3	33.4	32.6	31.8	31.1	30.4	29.7	1100
1200	166.2	140.0	121.3	107.3	96.4	87.6	80.5	74.5	69.5	65.2	61.4	58.2	55.2	52.7	50.4	48.3	46.5	44.8	43.2	41.8	40.5	39.3	38.2	37.1	36.2	35.3	34.4	33.5	32.9	32.2	1200
1300	178.5	150.4	130.3	115.3	103.5	94.2	86.5	80.1	74.7	70.1	66.0	62.5	59.4	56.7	54.2	52.0	50.0	48.2	46.5	45.0	43.6	42.3	41.1	39.9	38.9	37.9	37.0	36.2	35.4	34.6	1300
1400	190.8	160.8	139.3	123.2	110.7	100.7	92.5	85.7	79.9	74.9	70.7	66.9	63.6	60.6	58.0	55.6	53.5	51.5	49.8	48.1	46.6	45.2	43.9	42.8	41.8	40.8	39.8	38.9	38.1	37.4	1400
1500	203.1	171.1	148.3	131.2	117.9	107.2	98.5	91.2	85.1	79.8	75.3	71.3	67.7	64.6	61.8	59.3	57.0	54.9	53.0	51.3	49.7	48.2	46.8	45.6	44.4	43.3	42.3	41.3	40.4	39.5	1500
1600	215.4	181.5	157.3	139.2	125.0	113.7	104.5	96.8	90.3	84.7	79.9	75.6	71.9	68.6	65.6	62.9	60.5	58.3	56.3	54.4	52.7	51.2	49.7	48.4	47.1	46.0	44.9	43.9	42.9	42.0	1600
1700	227.7	191.9	166.3	147.1	132.2	120.3	110.5	102.4	95.5	89.6	84.5	80.0	76.0	72.5	69.4	66.6	64.0	61.7	59.7	57.6	55.8	54.2	52.6	51.2	50.0	48.6	47.5	46.4	45.4	44.4	1700
1800	240.0	202.3	175.3	155.1	139.4	126.8	116.5	107.9	100.7	94.5	89.1	84.3	80.2	76.5	73.2	70.2	67.5	65.1	62.8	60.8	58.9	57.1	55.5	54.0	52.6	51.3	50.1	49.0	47.9	46.9	1800
1900	252.3	212.7	184.3	163.1	146.6	133.3	122.5	113.5	105.9	99.3	93.7	88.7	84.3	80.4	77.0	73.8	71.0	68.4	66.1	63.9	61.9	60.1	58.4	56.8	55.4	54.0	52.7	51.5	50.4	49.3	1900
2000	264.6	223.0	193.3	171.0	153.7	139.9	128.5	119.1	111.1	104.2	98.3	93.1	88.5	84.4	80.8	77.5	74.5	71.8	69.3	67.1	65.0	63.1	61.3	60.0	58.1	56.7	55.3	54.1	52.9	51.8	2000
2100	276.9	233.4	202.3	179.0	160.9	146.4	134.5	124.6	116.3	109.1	102.9	97.4	92.6	88.4	84.6	81.1	78.0	75.2	72.6	70.2	68.1	66.1	64.2	62.5	60.9	59.4	58.0	56.6	55.4	54.2	2100
2200	289.2	243.8	211.3	187.0	168.1	152.9	140.5	130.2	121.5	114.0	107.5	101.8	96.8	92.3	88.3	84.8	81.5	78.6	75.9	73.4	71.1	69.0	67.1	65.3	63.8	62.0	60.6	59.2	57.9	56.7	2200
2300	301.5	254.2	220.3	195.0	175.2	159.4	146.5	135.8	126.7	118.8	112.1	106.2	100.9	96.3	92.1	88.4	85.0	81.9	79.1	76.6	74.2	72.0	70.0	68.1	66.4	64.7	63.2	61.8	60.4	59.2	2300
2400	313.8	264.5	229.3	202.9	182.4	166.0	152.5	141.3	131.8	123.7	116.7	110.5	105.1	100.3	95.9	92.0	88.5	85.3	82.4	79.7	77.3	75.0	72.9	70.9	69.1	67.4	65.8	64.3	62.9	61.6	2400
2500	326.1	274.9	238.3	210.9	189.6	172.5	158.5	146.9	137.0	128.6	121.3	114.9	109.2	104.2	99.7	95.7	92.0	88.7	85.7	82.9	80.3	78.0	75.8	73.7	71.8	70.1	68.4	66.9	65.4	64.1	2500
2600	338.4	285.3	247.3	218.9	196.7	179.0	164.5	152.5	142.2	133.5	125.9	119.2	113.4	108.2	103.5	99.3	95.5	92.1	88.9	86.0	83.4	80.9	78.7	76.6	74.6	72.8	71.0	69.4	67.9	66.5	2600
2700	350.7	295.7	256.3	226.8	203.9	185.5	170.5	158.0	147.4	138.4	130.5	123.6	117.5	112.1	107.3	103.0	99.0	95.5	92.2	89.2	86.5	83.9	81.6	79.4	77.3	75.4	73.7	72.0	70.4	69.0	2700
2800	363.0	306.0	265.3	234.8	211.1	192.1	176.5	163.6	152.6	143.2	135.1	128.0	121.7	116.1	111.1	106.6	102.5	98.8	95.5	92.4	89.5	86.9	84.5	82.2	80.1	78.1	76.3	74.6	72.9	71.4	2800
2900	375.3	316.4	274.3	242.8	218.2	198.6	182.5	169.2	157.8	148.1	139.7	132.3	125.8	120.1	114.9	110.3	106.0	102.2	98.7	95.5	92.6	90.0	87.3	85.0	82.8	80.8	78.9	77.1	75.4	73.9	2900
3000	387.6	326.8	283.3	250.8	225.4	205.1	188.5	174.7	163.0	153.0	144.3	136.7	130.0	124.0	118.7	113.9	109.5	105.6	102.0	98.7	95.6	92.8	90.2	87.8	85.6	83.5	81.5	79.7	77.9	76.3	3000
3100	399.9	337.2	292.3	258.7	232.6	211.7	194.5	180.3	168.2	157.9	148.9	141.1	134.1	128.0	122.5	117.5	113.0	109.0	105.3	101.8	98.7	95.8	93.1	90.6	88.3	86.2	84.1	82.2	80.5	78.8	3100
3200	412.2	347.5	301.3	266.7	239.7	218.2	200.5	185.8	173.4	162.8	153.5	145.4	138.3	132.0	126.3	121.2	116.6	112.4	108.5	105.0	101.8	98.8	96.0	93.5	91.1	88.8	86.7	84.8	83.0	81.2	3200
3300	424.5	357.9	310.3	274.7	246.9	224.7	206.6	191.4	178.6	167.6	158.1	149.8	142.5	135.9	130.1	124.8	120.1	115.7	111.8	108.2	104.8	101.8	98.9	96.3	93.8	91.5	89.4	87.4	85.5	83.7	3300
3400	436.8	368.3	319.3	282.6	254.1	231.2	212.6	197.0	183.8	172.5	162.7	154.2	146.6	139.9	133.9	128.5	123.6	119.1	115.1	111.3	107.9	104.7	101.8	99.1	96.6	94.2	92.0	89.9	88.0	86.1	3400
3500	449.1	378.7	328.3	290.6	261.3	237.8	218.6	202.5	189.0	177.4	167.3	158.5	150.7	143.8	137.7	132.1	127.1	122.5	118.3	114.5	111.0	107.7	104.7	101.9	99.3	96.9	94.6	92.5	90.5	88.6	3500
Term. 2/	18.614	15.512	13.296	11.634	10.341	9.307	8.461	7.756	7.159	6.648	6.205	5.817	5.475	5.171	4.898	4.654	4.432	4.230	4.047	3.878	3.723	3.580	3.447	3.324	3.209	3.102	3.002	2.908	2.820	2.737	Term. 2/
L. H. 3/	.123000	.103756	.090014	.079706	.071689	.065275	.060027	.055654	.051954	.048782	.046033	.043628	.041506	.039619	.037932	.036413	.035038	.033789	.032648	.031602	.030640	.029752	.028930	.028166	.027455	.026792	.026171	.025589	.025042	.024528	L. H. 3/

1/ Based on a tare weight of 21.9 tons and a ratio of empty car miles to loaded car miles of 0.857. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.23

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 80 (Concluded).--TERRITORY NO. 12 - TOTAL UNITED STATES

CARLOAD COST SCALES FOR COMMODITIES MOVING IN GONDOLA AND HOPPER CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	10
20	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	20
30	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	30
40	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	40
50	3.9	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	50
60	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	60
70	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.6	70
80	4.5	4.5	4.4	4.3	4.2	4.1	4.1	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.8	2.8	80
90	4.8	4.7	4.6	4.6	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	2.9	2.9	90
100	5.1	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1	100
120	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	120
140	5.9	5.9	5.8	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.8	140
160	6.3	6.4	6.2	6.1	6.0	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.2	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.2	4.2	4.2	4.1	160
180	6.6	6.8	6.7	6.5	6.4	6.3	6.2	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.5	4.4	4.4	180
200	7.0	7.3	7.1	7.0	6.9	6.7	6.6	6.5	6.4	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8	4.8	200
220	7.9	7.8	7.6	7.5	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.1	220
240	8.4	8.2	8.1	7.9	7.8	7.6	7.5	7.3	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.0	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.4	240
260	8.9	8.7	8.5	8.4	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.2	6.2	6.1	6.0	5.9	5.9	5.8	5.8	260
280	9.4	9.2	9.0	8.8	8.6	8.5	8.3	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.7	6.6	6.5	6.4	6.4	6.3	6.2	6.2	6.1	280
300	9.9	9.7	9.5	9.3	9.1	8.9	8.8	8.6	8.5	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.6	6.5	6.4	300
320	10.4	10.1	9.9	9.7	9.5	9.4	9.2	9.0	8.9	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	7.0	6.9	6.8	6.8	320
340	10.8	10.6	10.4	10.2	10.0	9.8	9.6	9.5	9.3	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.3	7.2	7.2	7.1	340
360	11.3	11.1	10.8	10.6	10.4	10.2	10.1	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.5	7.4	360
380	11.8	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.7	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.5	8.4	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.8	380
400	12.3	12.0	11.8	11.5	11.3	11.1	10.9	10.7	10.6	10.4	10.2	10.1	9.9	9.8	9.6	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.2	8.1	400
420	12.8	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.2	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	420
440	13.2	13.0	12.7	12.5	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.6	10.4	10.3	10.1	10.0	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	440
460	13.7	13.4	13.2	12.9	12.7	12.4	12.2	12.0	11.8	11.6	11.4	11.3	11.1	10.9	10.8	10.6	10.5	10.4	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.4	9.4	9.3	9.2	9.1	460
480	14.2	13.9	13.6	13.4	13.1	12.9	12.7	12.4	12.2	12.0	11.8	11.7	11.5	11.3	11.2	11.0	10.9	10.7	10.6	10.5	10.4	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	480
500	14.7	14.4	14.1	13.8	13.6	13.3	13.1	12.9	12.7	12.4	12.3	12.1	11.9	11.7	11.6	11.4	11.3	11.1	11.0	10.8	10.7	10.6	10.5	10.4	10.2	10.1	10.0	9.9	9.8	9.7	500
600	17.1	16.7	16.4	16.1	15.8	15.5	15.2	15.0	14.7	14.5	14.3	14.1	13.9	13.7	13.5	13.3	13.1	13.0	12.8	12.7	12.5	12.4	12.2	12.1	12.0	11.9	11.7	11.6	11.5	11.4	600
700	19.5	19.1	18.7	18.4	18.0	17.7	17.4	17.1	16.8	16.6	16.3	16.1	15.9	15.6	15.4	15.2	15.0	14.8	14.7	14.5	14.3	14.2	14.0	13.9	13.7	13.6	13.4	13.3	13.2	13.1	700
800	21.9	21.5	21.0	20.6	20.3	19.9	19.6	19.3	18.9	18.7	18.4	18.1	17.8	17.6	17.4	17.1	16.9	16.7	16.5	16.3	16.1	15.9	15.8	15.6	15.4	15.3	15.1	15.0	14.8	14.7	800
900	24.3	23.8	23.4	22.9	22.5	22.1	21.7	21.4	21.0	20.7	20.4	20.1	19.8	19.6	19.3	19.0	18.8	18.6	18.4	18.1	17.9	17.7	17.5	17.4	17.2	17.0	16.8	16.7	16.5	16.4	900
1000	26.7	26.2	25.7	25.2	24.7	24.3	23.9	23.5	23.1	22.8	22.4	22.1	21.8	21.5	21.2	21.0	20.7	20.4	20.2	20.0	19.7	19.5	19.3	19.1	18.9	18.7	18.5	18.4	18.2	18.0	1000
1100	29.1	28.5	28.0	27.5	27.0	26.5	26.1	25.6	25.2	24.9	24.5	24.1	23.8	23.5	23.2	22.9	22.6	22.3	22.0	21.8	21.5	21.3	21.1	20.9	20.6	20.4	20.2	20.0	19.9	19.7	1100
1200	31.5	30.9	30.3	29.7	29.2	28.7	28.2	27.8	27.3	26.9	26.5	26.1	25.8	25.4	25.1	24.8	24.5	24.2	23.9	23.6	23.3	23.1	22.8	22.6	22.4	22.2	21.9	21.7	21.5	21.3	1200
1300	33.9	33.2	32.6	32.0	31.4	30.9	30.4	29.9	29.4	29.0	28.6	28.2	27.8	27.4	27.0	26.7	26.4	26.0	25.7	25.4	25.2	24.9	24.6	24.4	24.1	23.9	23.6	23.4	23.2	23.0	1300
1400	36.3	35.6	34.9	34.3	33.7	33.1	32.6	32.0	31.5	31.1	30.6	30.2	29.7	29.3	29.0	28.6	28.2	27.9	27.6	27.3	27.0	26.7	26.4	26.1	25.8	25.6	25.3	25.1	24.9	24.7	1400
1500	38.7	38.0	37.2	36.6	35.9	35.3	34.7	34.2	33.6	33.1	32.6	32.2	31.7	31.3	30.9	30.5	30.1	29.8	29.4	29.1	28.8	28.4	28.1	27.9	27.6	27.3	27.0	26.8	26.5	26.3	1500
1600	41.1	40.3	39.6	38.8	38.1	37.5	36.9	36.3	35.7	35.2	34.7	34.2	33.7	33.3	32.8	32.4	32.0	31.6	31.3	30.9	30.6	30.2	29.9	29.6	29.3	29.0	28.7	28.5	28.2	28.0	1600
1700	43.5	42.7	41.9	41.1	40.4	39.7	39.0	38.4	37.8	37.3	36.7	36.2	35.7	35.2	34.8	34.3	33.9	33.5	33.1	32.7	32.4	32.0	31.7	31.4	31.0	30.7	30.4	30.2	29.9	29.6	1700
1800	45.9	45.0	44.2	43.4	42.6	41.9	41.2	40.5	39.9	39.3	38.7	38.2	37.7	37.2	36.7	36.2	35.8	35.4	35.0	34.6	34.2	33.8	33.5	33.1	32.8	32.5	32.1	31.8	31.6	31.3	1800
1900	48.3	47.4	46.5	45.7	44.9	44.1	43.4	42.7	42.0	41.4	40.8	40.2	39.7	39.1	38.5	38.1	37.7	37.2	36.8	36.4	36.0	35.6	35.2	34.9	34.5	34.2	33.9	33.5	33.2	32.9	1900
2000	50.7	49.8	48.8	47.9	47.1	46.3	45.5	44.8	44.1	43.5	42.8	42.2	41.6	41.1	40.6	40.1	39.6	39.1	38.6	38.2	37.8	37.4	37.0	36.6	36.2	35.9	35.6	35.2	34.9	34.6	2000
2100	53.1	52.1	51.1	50.2	49.3	48.5	47.7	46.9	46.2	45.5	44.9	44.2	43.6	43.0	42.5	42.0	41.4	41.0	40.5	40.0	40.0	39.2	38.8	38.4	38.0	37.6	37.3	36.9	36.6	36.3	2100
2200	55.6	54.5	53.4	52.5	51.5	50.7	49.9	49.1	48.3	47.6	46.9	46.2	45.5	45.0	44.4	43.9	43.3	42.8	42.3	41.9	41.4	40.9	40.5	40.1	39.7	39.3	39.0	38.6	38.2	37.9	2200
2300	58.0	56.8	55.8	54.8	53.8	52.9	52.0	51.2	50.4	49.7	48.9	48.3	47.6	47.0	46.4	45.8	45.2	44.7	44.2	43.7	43.2	42.7	42.3	41.9	41.4	41.0	40.7	40.3	39.9	39.6	2300
2400	60.4	59.2	58.1	57.0	56.0	55.1	54.2	53.3	52.5	51.7	51.0	50.3	49.6	48.9	48.3	47.7	47.1	46.6	46.0	45.5	45.0	44.5	44.1	43.8	43.3	42.8	42.4	42.0	41.6	41.2	2400
2500	62.8	61.5	60.4	59.3	58.3	57.3	56.3	55.5	54.6	53.8	53.0	52.3	51.6	50.9	50.2	49.6	49.0	48.4	47.9	47.3	46.8	46.3	45.8	45.4	44.9	44.5	44.1	43.7	43.3	42.9	2500
2600	65.2	63.9	62.7	61.6	60.5	59.5	58.5	57.6	56.7	55.9	55.1	54.3	53.5	52.8	52.2	51.5	50.9	50.3	49.7	49.1	48.6	48.1	47.6	47.1	46.6	46.2	45.8	45.3	44.9	44.5	2600
2700	67.6	66.3	65.0	63.8	62.7	61.7	60.7	59.7	58.8	57.9	57.1	56.3	55.5	54.8	54.1	53.4	52.8	52.1	51.5	51.0	50.4	49.9	49.4	48.9	48.4	47.9	47.5	47.0	46.6	46.2	2700
2800	70.0	68.6	67.3	66.1	65.0	63.9	62.8	61.8	60.9	60.0	59.1	58.3	57.5	56.8	56.0	55.3	54.7	54.0	53.4	52.8	52.2	51.7	51.1	50.6	50.1	49.6	49.2	48.7	48.3	47.9	2800
2900	72.4	71.0	69.7	68.4	67.2	66.1	65.0	64.0	63.0	62.1	61.2	60.3	59.5	58.7	58.0	57.2	56.5	55.9	55.2	54.6	54.0	53.5	52.9	52.4	51.8	51.3	50.9	50.4	49.9	49.5	2900
3000	74.8	73.3	72.0	70.7	69.4	68.3	67.2	66.1	65.1	64.1	63.2	62.3	61.5	60.7	59.9	59.1	58.4	57.7	57.1	56.4	55.8	55.2	54.7	54.1	53.6	53.1	52.6	52.1	51.6	51.2	3000
3100	77.2	75.7	74.3	72.9	71.7	70.5	69.3	68.2	67.2	66.2	65.2	64.3	63.5	62.6	61.8	61.1	60.3	59.6	58.9	58.3	57.6	57.0	56.4	55.9	55.3	54.8	54.3	53.8	53.3	52.8	3100
3200	79.6	78.1	76.6	75.2	73.9	72.7	71.5	70.4	69.3	68.2	67.3	66.3	65.4	64.6	63.8	63.0	62.2	61.5	60.8	60.1	59.4	58.8	58.2	57.6	57.0	56.5	56.0	55.5	55.0	54.5	3200
3300	82.0	80.4	78.9	77.5	76.1	74.9	73.7	72.5	71.4	70.3	69.3	68.3	67.4	66.5	65.7	64.9	64.1	63.3	62.6	61.9	61.2	60.6	60.0	59.4	58.8	58.2	57.7	57.1	56.6	56.1	3300
3400	84.4	82.8	81.2	80.0	78.4	77.1	75.8	74.5	73.5	72.4	71.4	70.4	69.4	68.5	67.6	66.8	66.0	65.2	64.5	63.7	63.0	62.4	61.7	61.1	60.5	59.9	59.4	58.8	58.3	57.8	3400
3500	86.8	85.1	83.5	82.0	80.6	79.3	78.0	76.7	75.6	74.5	73.4	72.4	71.4	70.5	69.6	68.7	67.9	67.1	66.3	65.6	64.8	64.2	63.5	62.9	62.2	61.6	61.1	60.5	60.0	59.4	3500
Term. 2/	2.659	2.585	2.515	2.449	2.386	2.327	2.270	2.216	2.164	2.115	2.068	2.023	1.980	1.939	1.899	1.861	1.825	1.790	1.756	1.724	1.692	1.662	1.633	1.605	1.577	1.551	1.526	1.501	1.477	1.454	Term. 2/
L. H. 3/	.024043	.023585	.023151	.022741	.022351	.021981	.021629	.021294	.020974	.020669	.020378	.020099	.019832	.019576	.019331	.019095	.018869	.018651	.018442	.018240	.018045	.017858	.017677	.017503	.017334	.017171	.017013	.016860	.016713	.016570	L. H. 3/

1/ Based on a tare weight of 21.9 tons and a ratio of empty car miles to loaded car miles of 0.857. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 12 - Total United States

TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1935 1/

Miles	Net load in tons per car																													Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.2	14.3	12.3	10.8	9.6	8.6	7.9	7.2	6.7	6.2	5.8	5.4	5.1	4.8	4.5	4.4	4.1	4.0	3.8	3.6	3.5	3.4	3.2	3.1	3.0	2.8	2.7	2.7	2.6	2.5	10
20	18.6	15.5	13.3	11.7	10.4	9.4	8.5	7.8	7.2	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.5	4.3	4.2	4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.9	20
30	20.0	16.7	14.3	12.6	11.2	10.1	9.2	8.5	7.8	7.3	6.8	6.4	6.0	5.7	5.4	5.2	4.9	4.7	4.5	4.4	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	30
40	21.4	17.9	15.3	13.5	12.0	10.8	9.9	9.1	8.4	7.8	7.3	6.9	6.5	6.2	5.8	5.6	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	40
50	22.8	19.0	16.4	14.4	12.8	11.6	10.5	9.7	9.0	8.4	7.8	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.2	5.0	4.8	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	3.7	50
60	24.1	20.2	17.4	15.3	13.6	12.3	11.2	10.3	9.6	8.9	8.4	7.9	7.4	7.0	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.0	3.9	60
70	25.5	21.4	18.4	16.2	14.4	13.0	11.9	10.9	10.1	9.5	8.9	8.4	7.9	7.5	7.1	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.2	5.0	4.8	4.7	4.6	4.4	4.3	4.2	70
80	26.9	22.6	19.4	17.1	15.2	13.8	12.6	11.6	10.7	10.0	9.4	8.8	8.3	7.9	7.5	7.2	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.7	4.6	4.5	80
90	28.3	23.7	20.4	18.0	16.0	14.5	13.2	12.2	11.3	10.5	9.9	9.3	8.8	8.4	8.0	7.6	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.3	5.1	5.0	4.9	4.7	90
100	29.7	24.9	21.4	18.9	16.8	15.2	13.9	12.8	11.9	11.1	10.4	9.8	9.3	8.8	8.4	8.0	7.7	7.3	7.1	6.8	6.5	6.3	6.1	5.9	5.7	5.6	5.4	5.3	5.1	5.0	100
120	32.5	27.2	23.5	20.7	18.5	16.7	15.3	14.1	13.0	12.2	11.4	10.8	10.2	9.7	9.2	8.8	8.4	8.1	7.8	7.5	7.2	7.0	6.8	6.5	6.4	6.2	6.0	5.8	5.7	5.6	120
140	35.3	29.5	25.6	22.5	20.1	18.2	16.6	15.3	14.2	13.3	12.5	11.8	11.1	10.6	10.1	9.6	9.2	8.8	8.5	8.2	7.9	7.6	7.4	7.2	7.0	6.8	6.6	6.4	6.2	6.1	140
160	38.1	31.9	27.5	24.2	21.7	19.6	18.0	16.6	15.4	14.4	13.5	12.7	12.1	11.4	10.9	10.4	10.0	9.6	9.2	8.9	8.6	8.3	8.0	7.8	7.6	7.4	7.2	7.0	6.8	6.5	160
180	40.9	34.3	29.6	26.0	23.3	21.1	19.3	17.8	16.6	15.6	14.5	13.7	13.0	12.3	11.8	11.2	10.8	10.3	9.9	9.6	9.3	9.0	8.7	8.4	8.2	7.9	7.7	7.5	7.3	7.2	180
200	43.5	36.6	31.6	27.8	24.9	22.6	20.7	19.1	17.7	16.6	15.6	14.7	13.9	13.2	12.6	12.0	11.5	11.1	10.7	10.3	9.9	9.6	9.3	9.0	8.8	8.5	8.3	8.1	7.9	7.7	200
220	46.4	39.0	33.6	29.6	26.5	24.0	22.0	20.3	18.9	17.6	16.6	15.7	14.8	14.1	13.4	12.9	12.3	11.8	11.4	11.0	10.6	10.3	10.0	9.7	9.4	9.1	8.9	8.7	8.4	8.2	220
240	49.2	41.3	35.7	31.4	28.1	25.5	23.4	21.6	20.1	18.7	17.6	16.6	15.8	15.0	14.3	13.7	13.1	12.6	12.1	11.7	11.3	10.9	10.6	10.3	10.0	9.7	9.5	9.2	9.0	8.8	240
260	52.0	43.7	37.7	33.2	29.8	27.0	24.7	22.8	21.2	19.8	18.6	17.6	16.7	15.9	15.1	14.5	13.9	13.3	12.8	12.4	12.0	11.6	11.2	10.9	10.6	10.3	10.0	9.8	9.5	9.3	260
280	54.8	46.0	39.7	35.0	31.4	28.4	26.1	24.1	22.4	20.9	19.7	18.6	17.6	16.7	16.0	15.3	14.7	14.1	13.6	13.1	12.6	12.2	11.9	11.5	11.2	10.9	10.6	10.3	10.1	9.9	280
300	57.6	48.4	41.3	36.8	33.0	29.9	27.4	25.3	23.5	22.0	20.7	19.5	18.5	17.6	16.8	16.1	15.4	14.8	14.3	13.8	13.3	12.9	12.5	12.1	11.8	11.5	11.2	10.9	10.6	10.4	300
320	60.4	50.7	43.8	38.6	34.6	31.4	28.8	26.6	24.7	23.1	21.7	20.5	19.5	18.5	17.7	16.9	16.2	15.6	15.0	14.5	14.0	13.6	13.1	12.8	12.4	12.1	11.8	11.5	11.2	10.9	320
340	63.1	53.0	45.8	40.4	36.2	32.9	30.1	27.8	25.9	24.2	22.8	21.6	20.4	19.4	18.5	17.7	17.0	16.3	15.7	15.2	14.7	14.2	13.8	13.4	13.0	12.7	12.3	12.0	11.7	11.5	340
360	65.9	55.4	47.9	42.2	37.8	34.3	31.4	29.1	27.0	25.3	23.8	22.5	21.3	20.3	19.4	18.5	17.8	17.1	16.5	15.9	15.4	14.9	14.4	14.0	13.6	13.3	12.9	12.6	12.3	12.0	360
380	68.7	57.7	49.9	44.0	39.4	35.8	32.8	30.3	28.2	26.4	24.8	23.5	22.3	21.2	20.3	19.3	18.5	17.8	17.2	16.6	16.0	15.5	15.1	14.6	14.2	13.8	13.5	13.2	12.8	12.6	380
400	71.5	60.1	51.9	45.8	41.1	37.3	34.1	31.5	29.4	27.5	25.8	24.4	23.2	22.0	21.0	20.1	19.3	18.6	17.9	17.3	16.7	16.2	15.7	15.2	14.8	14.4	14.1	13.7	13.4	13.1	400
420	74.3	62.4	54.0	47.6	42.7	38.7	35.5	32.8	30.5	28.6	26.9	25.4	24.1	22.9	21.9	20.9	20.1	19.3	18.6	18.0	17.4	16.8	16.3	15.9	15.4	15.0	14.6	14.3	13.9	13.6	420
440	77.1	64.8	56.0	49.4	44.3	40.2	36.8	34.0	31.7	29.7	27.9	26.4	25.0	23.8	22.7	21.8	20.9	20.1	19.4	18.7	18.1	17.5	17.0	16.5	16.0	15.6	15.2	14.8	14.5	14.2	440
460	79.9	67.1	58.0	51.2	45.9	41.7	38.2	35.3	32.9	30.8	28.9	27.3	25.9	24.7	23.6	22.6	21.7	20.8	20.1	19.4	18.7	18.2	17.6	17.1	16.6	16.2	15.8	15.4	15.0	14.7	460
480	82.6	69.5	60.1	53.0	47.5	43.1	39.5	36.5	34.0	31.8	30.0	28.3	26.9	25.6	24.4	23.4	22.4	21.6	20.8	20.1	19.4	18.8	18.3	17.7	17.2	16.8	16.4	16.0	15.6	15.2	480
500	85.4	71.8	62.1	54.8	49.1	44.6	40.9	37.8	35.2	32.9	31.0	29.3	27.8	26.5	25.3	24.2	23.2	22.3	21.5	20.8	20.1	19.5	18.9	18.4	17.9	17.4	16.9	16.5	16.1	15.8	500
600	99.4	83.5	72.3	63.8	57.2	51.9	47.6	44.0	41.0	38.4	36.1	34.2	32.4	30.9	29.5	28.2	27.1	26.1	25.1	24.3	23.5	22.8	22.1	21.5	20.9	20.3	19.8	19.3	18.9	18.5	600
700	113.3	95.3	82.4	72.8	65.3	59.3	54.4	50.3	46.8	43.9	41.3	39.0	37.0	35.3	33.7	32.3	31.0	29.8	28.8	27.8	26.9	26.1	25.3	24.6	23.9	23.3	22.7	22.2	21.6	21.2	700
800	127.2	107.0	92.6	81.8	73.4	66.6	61.1	56.5	52.6	49.3	46.4	43.9	41.7	39.7	37.9	36.3	34.8	33.6	32.4	31.3	30.3	29.3	28.5	27.7	26.9	26.2	25.6	25.0	24.4	23.9	800
900	141.1	118.7	102.8	90.8	81.4	74.0	67.9	62.8	58.5	54.8	51.6	48.8	46.3	44.1	42.1	40.4	38.8	37.3	36.0	34.8	33.7	32.6	31.7	30.8	30.0	29.2	28.5	27.8	27.1	26.6	900
1000	155.1	130.5	112.9	99.7	89.5	81.3	74.6	69.0	64.3	60.2	56.7	53.6	50.9	48.5	46.4	44.4	42.7	41.1	39.6	38.3	37.1	35.9	34.9	33.9	33.0	32.1	31.3	30.6	29.9	29.2	1000
1100	169.0	142.2	123.1	108.7	97.6	88.6	81.3	75.3	70.1	65.7	61.9	58.5	55.6	52.9	50.6	48.5	46.6	44.8	43.2	41.8	40.4	39.2	38.1	37.0	36.0	35.1	34.2	33.4	32.7	31.9	1100
1200	182.9	153.9	133.2	117.7	105.6	96.0	88.1	81.5	75.9	71.2	67.0	63.4	60.2	57.4	54.8	52.5	50.5	48.6	46.9	45.3	43.8	42.5	41.3	40.1	39.0	38.0	37.1	36.2	35.4	34.6	1200
1300	196.8	165.7	143.4	126.7	113.7	103.3	94.8	87.7	81.7	76.6	72.2	68.3	64.8	61.8	59.0	56.6	54.3	52.3	50.5	48.8	47.2	45.8	44.4	43.2	42.1	41.0	40.0	39.0	38.2	37.3	1300
1400	210.8	177.4	153.6	135.7	121.8	110.7	101.6	94.0	87.5	82.1	77.3	73.1	69.5	66.2	63.3	60.6	58.2	56.1	54.1	52.3	50.6	49.1	47.6	46.3	45.1	43.9	42.9	41.9	40.9	40.0	1400
1500	224.7	189.1	163.7	144.7	129.9	118.0	108.3	100.2	93.4	87.5	82.4	78.0	74.1	70.6	67.5	64.7	62.1	59.8	57.7	55.8	54.0	52.4	50.8	49.4	48.1	46.9	45.7	44.7	43.7	42.7	1500
1600	238.6	200.9	173.9	153.7	137.9	125.4	114.1	106.5	99.2	93.0	87.6	82.9	78.7	75.0	71.7	68.7	66.0	63.6	61.3	59.3	57.4	55.6	54.0	52.5	51.1	49.8	48.6	47.5	46.4	45.4	1600
1700	252.5	212.6	184.1	162.7	146.0	132.7	121.8	112.7	105.0	98.4	92.7	87.7	83.3	79.4	75.9	72.8	69.9	67.3	64.9	62.8	60.8	58.9	57.2	55.6	54.2	52.8	51.5	50.3	49.2	48.1	1700
1800	266.5	224.3	194.2	171.6	154.1	140.0	128.5	119.0	110.9	103.9	97.9	92.6	88.0	83.8	80.1	76.8	73.8	71.1	68.6	66.3	64.2	62.2	60.4	58.7	57.2	55.7	54.4	53.1	51.9	50.8	1800
1900	280.4	236.1	204.4	180.6	162.2	147.4	135.3	125.2	116.7	109.4	103.0	97.5	92.6	88.3	84.4	80.9	77.7	74.8	72.2	69.8	67.6	65.5	63.6	61.9	60.2	58.7	57.3	55.9	54.7	53.5	1900
2000	294.3	247.8	214.6	189.6	170.2	154.7	142.0	131.4	122.5	114.8	108.2	102.4	97.2	92.7	88.6	84.9	81.6	78.6	75.8	73.3	70.9	68.8	66.8	65.0	63.2	61.6	60.1	58.7	57.4	56.2	2000
2100	308.3	259.5	224.7	198.6	178.3	162.1	148.8	137.7	128.3	120.3	113.3	107.2	101.9	97.1	92.8	89.0	85.5	82.3	79.4	76.8	74.3	72.1	70.0	68.1	66.3	64.6	63.0	61.5	60.2	58.9	2100
2200	322.2	271.3	234.9	207.6	186.4	169.4	155.5	143.9	134.1	125.7	118.5	112.1	106.5	101.5	97.0	93.0	89.4	86.1	83.0	80.3	77.7	75.4	73.2	71.2	69.3	67.5	65.9	64.4	62.9	61.5	2200
2300	336.1	283.0	245.0	216.6	194.4	176.7	162.2	150.2	140.0	131.2	123.6	117.0	111.1	105.9	101.2	97.1	93.3	89.8	86.7	83.8	81.1	78.7	76.4	74.3	72.3	70.5	68.8	67.2	65.7	64.2	2300
2400	350.0	294.7	255.2	225.6	202.5	184.1	169.0	156.4	145.8	136.7	128.8	121.8	115.7	110.3	105.5	101.1	97.1	93.6	90.3	87.3	84.5	82.0	79.6	77.4	75.3	73.4	71.7	70.0	68.4	66.9	2400
2500	364.0	306.5	265.4	234.6	210.6	191.4	175.7	162.7	151.6	142.1	133.9	126.7	120.4	114.7	109.7	105.1	101.0	97.3	93.9	90.8	87.9	85.2	82.8	80.5	78.4	76.4	74.5	72.8	71.2	69.6	2500
2600	377.9	318.2	275.5	243.5	218.7	198.8	182.5	168.9	157.4	147.6	139.1	131.6	125.0	119.1	113.9	109.2	104.9	101.1	97.5	94.3	91.3	88.5	86.0	83.6	81.4	79.3	77.4	75.6	73.9	72.3	2600
2700	391.8	329.9	285.7	252.5	226.7	206.1	189.2	175.1	163.2	153.0	144.2	136.5	129.5	123.6	118.1	113.2	108.8	104.8	101.1	97.8	94.7	91.8	89.2	86.7	84.4	82.3	80.3	78.4	76.7	75.0	2700
2800	405.7	341.6	295.9	261.6	234.8	213.4	196.0	181.4	169.1	158.5	149.3	141.3	134.3	128.0	122.4	117.3	112.7	108.5	104.8	101.3	98.1	95.1	92.4	89.8	87.5	85.2	83.2	81.2	79.4	77.7	2800
2900	419.7	353.4	306.0	270.6	242.9	220.8	202.7	187.6	174.9	164.0	154.5	146.2	138.9	132.4	126.6	121.3	116.6	112.3	108.4	104.8	101.5	98.4	95.6	92.9	90.5	88.2	85.1	84.0	82.2	80.4	2900
3000	433.6	365.1	316.2	279.5	251.0	228.1	209.4	193.9	180.7	169.4	159.6	151.1	143.5	136.8	130.8	125.4	120.5	116.0	112.0	108.3	104.8	101.7	98.8	96.0	93.5	91.1	88.9	86.9	84.9	83.1	3000
3100	447.5	376.8	326.4	288.5	259.0	235.5	216.2	200.1	186.5	174.9	164.8	155.9	148.1	141.2	135.0	129.4	124.4	119.8	115.6	111.8	108.2	105.0	101.9	99.1	96.5	94.1	91.8	89.7	87.7	85.8	3100
3200	461.5	388.6	336.5	297.5	267.1	243.0	222.9	206.4	192.4	180.3	169.9	160.8	152.8	145.6	139.2	133.5	128.3	123.5	119.2	115.2	111.6	108.3	105.1	102.2	99.6	97.0	94.7	92.5	90.4	88.5	3200
3300	475.4	400.3	346.7	306.5	275.2	250.1	229.7	212.6	198.2	185.8	175.1	165.7	157.4	150.0	143.5	137.5	132.2	127.3	122.8	118.6	115.0	111.5	108.3	105.4	102.6	100.0	97.6	95.3	93.2	91.2	3300
3400	489.3	412.3	356.8	315.4	283.2	257.5	236.4	218.9	204.0	191.3	180.2	170.6	162.0	154.5	147.7	141.6	136.1	131.0	126.5	122.3	118.4	114.8	111.5	108.5	105.6	102.9	100.5	98.1	95.9	93.9	3400
3500	503.2	423.8	367.0	324.4	291.3	264.8	243.2	225.1	209.8	196.7	185.4	175.4	166.7	158.9	151.9	145.6	140.0	134.8	130.1	125.8	121.8	118.1	114.7	111.6	108.6	105.9	103.3	100.9	98.7	96.5	3500
Term. 2/	15.790	13.158	11.279	9.869	8.772	7.895	7.177	6.579	6.073	5.639	5.263	4.934	4.644	4.386	4.155	3.948	3.760	3.589	3.433	3.290	3.158	3.037	2.924	2.820	2.722	2.632	2.547	2.467	2.392	2.322	Term. 2/
L. H. 3/	.139270	.117317	.101636	.089875	.080728	.073410	.067423	.062433	.058212	.054593	.051457	.048713	.046291	.044139	.042213	.040480	.038912	.037486	.036185	.034992	.033894	.032881	.031943	.031071	.030260	.029503	.028795	.028131	.027508	.026921	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.977. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Table 81 (Concluded).--TERRITORY NO. 12 - TOTAL UNITED STATES

CARLOAD COST SCALES FOR COMMODITIES MOVING IN TANK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																													Miles
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
10	2.8	2.7	2.6	2.5	2.4	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
20	3.8	3.7	3.6	3.5	3.4	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
30	4.8	4.7	4.6	4.5	4.4	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
40	5.8	5.7	5.6	5.5	5.4	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.5	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
50	6.8	6.7	6.6	6.5	6.4	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
60	7.8	7.7	7.6	7.5	7.4	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
70	8.8	8.7	8.6	8.5	8.4	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
80	9.8	9.7	9.6	9.5	9.4	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.3	3.3	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
90	10.8	10.7	10.6	10.5	10.4	4.1	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
100	11.8	11.7	11.6	11.5	11.4	4.4	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
110	12.8	12.7	12.6	12.5	12.4	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
120	13.8	13.7	13.6	13.5	13.4	5.3	5.2	5.1	5.0	4.9	4.9	4.8	4.7	4.6	4.5	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
140	14.8	14.7	14.6	14.5	14.4	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	5.0	4.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
160	15.8	15.7	15.6	15.5	15.4	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
180	16.8	16.7	16.6	16.5	16.4	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.8	5.7	5.7	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
200	17.8	17.7	17.6	17.5	17.4	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220
220	18.8	18.7	18.6	18.5	18.4	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
240	19.8	19.7	19.6	19.5	19.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
260	20.8	20.7	20.6	20.5	20.4	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
280	21.8	21.7	21.6	21.5	21.4	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
300	22.8	22.7	22.6	22.5	22.4	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
320	23.8	23.7	23.6	23.5	23.4	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
340	24.8	24.7	24.6	24.5	24.4	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
360	25.8	25.7	25.6	25.5	25.4	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
380	26.8	26.7	26.6	26.5	26.4	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
400	27.8	27.7	27.6	27.5	27.4	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	420
420	28.8	28.7	28.6	28.5	28.4	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
440	29.8	29.7	29.6	29.5	29.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460
460	30.8	30.7	30.6	30.5	30.4	10.6	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
480	31.8	31.7	31.6	31.5	31.4	10.9	10.8	10.7	10.6	10.5	10.4	10.3	10.2	10.1	10.0	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
500	32.8	32.7	32.6	32.5	32.4	11.2	11.1	11.0	10.9	10.8	10.7	10.6	10.5	10.4	10.3	10.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	520
520	33.8	33.7	33.6	33.5	33.4	11.5	11.4	11.3	11.2	11.1	11.0	10.9	10.8	10.7	10.6	10.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	540
540	34.8	34.7	34.6	34.5	34.4	11.8	11.7	11.6	11.5	11.4	11.3	11.2	11.1	11.0	10.9	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	560
560	35.8	35.7	35.6	35.5	35.4	12.1	12.0	11.9	11.8	11.7	11.6	11.5	11.4	11.3	11.2	11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	580
580	36.8	36.7	36.6	36.5	36.4	12.4	12.3	12.2	12.1	12.0	11.9	11.8	11.7	11.6	11.5	11.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
600	37.8	37.7	37.6	37.5	37.4	12.7	12.6	12.5	12.4	12.3	12.2	12.1	12.0	11.9	11.8	11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	620
620	38.8	38.7	38.6	38.5	38.4	13.0	12.9	12.8	12.7	12.6	12.5	12.4	12.3	12.2	12.1	12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	640
640	39.8	39.7	39.6	39.5	39.4	13.3	13.2	13.1	13.0	12.9	12.8	12.7	12.6	12.5	12.4	12.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	660
660	40.8	40.7	40.6	40.5	40.4	13.6	13.5	13.4	13.3	13.2	13.1	13.0	12.9	12.8	12.7	12.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	680
680	41.8	41.7	41.6	41.5	41.4	13.9	13.8	13.7	13.6	13.5	13.4	13.3	13.2	13.1	13.0	12.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
700	42.8	42.7	42.6	42.5	42.4	14.2	14.1	14.0	13.9	13.8	13.7	13.6	13.5	13.4	13.3	13.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	720
720	43.8	43.7	43.6	43.5	43.4	14.5	14.4	14.3	14.2	14.1	14.0	13.9	13.8	13.7	13.6	13.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	740
740	44.8	44.7	44.6	44.5	44.4	14.8	14.7	14.6	14.5	14.4	14.3	14.2	14.1	14.0	13.9	13.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	760
760	45.8	45.7	45.6	45.5	45.4	15.1	15.0	14.9	14.8	14.7	14.6	14.5	14.4	14.3	14.2	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780
780	46.8	46.7	46.6	46.5	46.4	15.4	15.3	15.2	15.1	15.0	14.9	14.8	14.7	14.6	14.5	14.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
800	47.8	47.7	47.6	47.5	47.4	15.7	15.6	15.5	15.4	15.3	15.2	15.1	15.0	14.9	14.8	14.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	820
820	48.8	48.7	48.6	48.5	48.4	16.0	15.9	15.8	15.7	15.6	15.5	15.4	15.3	15.2	15.1	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	840
840	49.8	49.7	49.6	49.5	49.4	16.3	16.2	16.1	16.0	15.9	15.8	15.7	15.6	15.5	15.4	15.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	860
860	50.8	50.7	50.6	50.5	50.4	16.6	16.5	16.4	16.3	16.2	16.1	16.0	15.9	15.8	15.7	15.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	880
880	51.8	51.7	51.6	51.5	51.4	16.9	16.8	16.7	16.6	16.5	16.4	16.3	16.2	16.1	16.0	15.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
900	52.8	52.7	52.6	52.5	52.4	17.2	17.1	17.0	16.9	16.8	16.7	16.6	16.5	16.4	16.3	16.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	920
920	53.8	53.7	53.6	53.5	53.4	17.5	17.4	17.3	17.2	17.1	17.0	16.9	16.8	16.7	16.6	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	940
940	54.8	54.7	54.6	54.5	54.4	17.8	17.7	17.6	17.5	17.4	17.3	17.2	17.1	17.0	16.9	16.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	960
960	55.8	55.7	55.6	55.5	55.4	18.1	18.0	17.9	17.8	17.7	17.6	17.5	17.4	17.3	17.2	17.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	980
980	56.8	56.7	56.6	56.5	56.4	18.4	18.3	18.2	18.1	18.0	17.9	17.8	17.7	17.6	17.5	17.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
1000	57.8	57.7	57.6	57.5	57.4	18.7	18.6	18.5	18.4	18.3	18.2	18.1	18.0	17.9	17.8	17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1020
1020	58.8	58.7	58.6	58.5	58.4	19.0	18.9	18.8	18.7	18.6	18.5	18.4	18.3	18.2	18.1	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1040
1040	59.8	59.7	59.6	59.5	59.4	19.3	19.2	19.1	19.0	18.9	18.8	18.7	18.6	18.5	18.4	18.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1060
1060	60.8	60.7	60.6	60.5	60.4	19.6	19.5	19.4	19.3	19.2	19.1	19.0	18.9	18.8	18.7	18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1080
1080	61.8	61.7	61.6	61.5	61.4	19.9	19.8	19.7	19.6	19.5	19.4	19.3	19.2	19.1	19.0	18.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
1100	62.8	62.7	62.6	62.5	62.4	20.2	20.1	20.0	19.9	19.8	19.7	19.6	19.5	19.4	19.3	19.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1120
1120	63.8	63.7	63.6	63.5	63.4	20.5	20.4	20.3	20.2	20.1	20.0	19.9	19.8	19.7	19.6	19.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1140
1140	64.8	64.7	64.6	64.5	64.4	20.8	20.7	20.6	20.5	20.4	20.3	20.2	20.1	20.0	19.9	19.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1160
1160	65.8	65.7	65.6	65.5	65.4	21.1	21.0	20.9	20.8	20.7	20.6	20.5	20.4	20.3	20.2	20.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1180
1180	66.8	66.7	66.6	66.5	66.4	21.4	21.3	21.2	21.1	21.0	20.9	20.8	20.7	20.6	20.5	20.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1200	67.8	67.7	67.6	67.5	67.4	21.7	21.6	21.5	21.4	21.3	21.2	21.1	21.0	20.9	20.8	20.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1220
1220	68.8	68.7	68.6	68.5	68.4	22.0	21.9	21.8	21.7	21.6	21.5	21.4	21.3	21.2	21.1	21.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1240
1240	69.8	69.7	69.6	69.5	69.4	22.3	22.2	22.1	22.0	21.9	21.8	21.7	21.6	21.5	21.4	21.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1260
1260	70.8	70.7	70.6	70.5	70.4	22.6	22.5	22.4	22.3	22.2	22.1	22.0	21.9	21.8	21.7	21.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1280
1280	71.8	71.7	71.6	71.5	71.4	22.9	22.8	22.7	22.6	22.5	22.4	22.3	22.2	22.1	22.0	21.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
1300	72.8	72.7	72.6	72.5	72.4	23.2	23.1	23.0	22.9	22.8	22.7	22.6	22.5	22.4	22.3	22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320
1320	73.8	73.7	73.6	73.5	73.4	23.5	23.4	23.3	23.2	23.1	23.0	22.9	22.8	22.7	22.6	22.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1340
1340	74.8	74.7	74.6	74.5	74.4	23.8	23.7	23.6	23.5	23.4	23.3	23.2	23.1	23.0	22.9	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1360
1360	75.8	75.7	75.6	75.5	75.4	24.1	24.0	23.9	23.8	23.7	23.6	23.5	23.4	23.3	23.2	23.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1380
1380	76.8	76.7	76.6	76.5	76.4	24.4	24.3	24.2	24.1	24.0	23.9	23.8	23.7	23.6	23.5	23.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1400	77.8	77.7	77.6	77.5	77.4	24.7	24.6	24.5	24.4	24.3	24.2	24.1	24.0	23.9	23.8	23.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1420
1420	78.8	78.7	78.6	78.5	78.4	25.0	24.9	24.8	24.7	24.6	24.5	24.4	24.3	24.2	24.1	24.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1440
1440	79.8	79.7	79.6	79.5	79.4	25.3	25.2	25.1	25.0	24.9	24.8	24.7	24.6	24.5	24.4	24.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1460
1460	80.8	80.7	80.6	80.5	80.4	25.6	25.5	25.4	25.3	25.2	25.1	25.0	24.9	24.8	24.7	24.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1480
1480	81.8	81.7	81.6	81.5	81.4	25.9	25.8	25.7	25.6	25.5	25.4	25.3	25.2	25.1	25.0	24.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
1500	82.8	82.7	82.6	82.5	82.4	26.2	26.1	26.0	25.9	25.8	25.7	25.6	25.5	25.4	25.3	25.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1520
1520	83.8	83.7	83.6	83.5	83.4	26.5	26.4	26.3	26.2	26.1	26.0	25.9	25.8	25.7	25.6	25.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1540
1540	84.8	84.7	84.6	84.5	84.4	26.8	26.7	26.6	26.5	26.4	26.3	26.2	26.1	26.0	25.9	25.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1560
1560	85.8	85.7	85.6	85.5	85.4	27.1	27.0	26.9	26.8	26.7	26.6	26.5	26.4	26.3	26.2	26.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1580
1580	86.8	86.7	86.6	86.5	86.4	27.4	27.3	27.2	27.1	27.0	26.9	26.8	26.7	26.6	26.5	26.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600
1600	87.8	87.7	87.6	87.5	87.4	27.7	27.6	27.5	27.4	27.3	27.2	27.1	27.0	26.9	26.8	26.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1620
1620	88.8	88.7	88.6	88.5	88.4	28.0	27.9	27.8	27.7	27.6	27.5	27.4	27.3	27.2	27.1	27.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1640
1640	89.8	89.7	89.6	89.5	89.4	28.3	28.2	28.1	28.0	27.9	27.8	27.7	27.6	27.5	27.4	27.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1660
1660	90.8	90.7	90.6	90.5	90.4	28.6	28.5	28.4	28.3	28.2	28.1	28.0	27.9	27.8	27.7	27.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1680
1680	91.8	91.7	91.6	91.5	91.4	28.9	28.8	28.7	28.6	28.5	28.4	28.3	28.2	28.1	28.0	27.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1700
1700	92.8	92.7	92.6	92.5	92.4	29.2	29.1	29.0	28.9	28.8	28.7	28.6	28.5	28.4	28.3	28.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1720
1720	93.8	93.7	93.6	93.5	93.4	29.5	29.4	29.3	29.2	29.1	29.0	28.9	28.8	28.7	28.6	28.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1740
1740	94.8	94.7	94.6	94.5	94.4	29.8	29.7	29.6	29.5	29.4	29.3	29.2	29.1	29.0	28.9	28.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1760
1760	95.8	95.7	95.6	95.5	95.4	30.1	30.0	29.9	29.8	29.7	29.6	29.5	29.4	29.3	29.2	29.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1780
1780	96.8	96.7	96.6	96.5	96.4	30.4	30.3	30.2	30.1	30.0	29.9	29.8	29.7	29.6	29.5	29.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800
1800	97.8	97.7	97.6	97.5	97.4	30.7	30.6	30.5	30.4	30.3	30.2	30.1	30.0	29.9	29.8	29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1820
1820	98.8	98.7	98.6	98.5	98.4	31.0	30.9	30.8	30.7	30.6	30.5	30.4	30.3	30.2	30.1	30.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1840
1840	99.8	99.7	99.6	99.5	99.4	31.3	31.2	31.1	31.0	30.9	30.8	30.7	30.6	30.5	30.4	30.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1860
1860	100.8	100.7	100.6	100.5	100.4	31.6	31.5	31.4	31.3	31.2	31.1	31.0	30.9	30.8	30.7	30.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1880
1880	101.8	101.7	101.6	101.5	101.4	31.9	31.8	31.7	31.6	31.5	31.4	31.3	31.2	31.1	31.0	30.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1900
1900	102.8	102.7	102.6	102.5	102.4	32.2	32.1	32.0	31.9	31.8	31.7	31.6	31.5	31.4	31.3	31.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1920
1920	103.8	103.7	103.6	103.5	103.4	32.5	32.4	32.3	32.2	32.1	32.0	31.9	31.8	31.7	31.6	31.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1940
1940	104.8	104.7	104.6	104.5	104.4	32.8	32.7	32.6	32.5	32.4	32.3	32.2	32.1	32.0	31.9	31.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1960
1960	105.8	105.7	105.6	105.5	105.4	33.1	33.0	32.9	32.8	32.7	32.6	32.5	32.4	32.3	32.2	32.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1980
1980	106.8	106.7	106.6	106.5	106.4	33.4	33.3	33.2	33.1	33.0	32.9	32.8	32.7	32.6	32.5	32.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000
Term. 2/	2.256	2.193	2.134	2.078	2.024	1.974	1.926	1.880	1.836	1.794	1.754	1.716	1.680	1.645	1.611	1.579	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Term. 2/
L. H. 3/	.026367	.025644	.025350	.024882	.024437	.024015	.023613	.023231	.022866	.022518	.022186	.021867	.021563	.021271	.020991	.020722	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.977. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 12 - Total United States

STOCK CARS

TABLE 82.—TERRITORY NO. 12 - TOTAL UNITED STATES

CARLOAD COST SCALES FOR COMMODITIES MOVING IN STOCK CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	19.8	16.5	14.2	12.4	11.1	10.0	9.1	8.3	7.7	7.1	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4	-	-	-	-	10
20	21.1	17.6	15.1	13.2	11.8	10.6	9.7	8.9	8.2	7.6	7.1	6.7	6.3	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3	4.2	4.0	3.9	3.8	3.6	-	-	-	-	20
30	22.3	18.6	16.0	14.0	12.5	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.4	6.0	5.7	5.5	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	-	-	-	-	30
40	23.5	19.6	16.9	14.8	13.2	11.9	10.9	10.0	9.2	8.6	8.0	7.6	7.1	6.8	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.8	4.6	4.4	4.3	4.2	-	-	-	-	40
50	24.7	20.7	17.8	15.6	13.9	12.6	11.5	10.5	9.7	9.1	8.5	8.0	7.5	7.1	6.8	6.5	6.2	5.9	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	-	-	-	-	50
60	26.0	21.7	18.7	16.4	14.6	13.2	12.0	11.1	10.3	9.6	9.0	8.4	8.0	7.5	7.2	6.8	6.5	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.7	-	-	-	-	60
70	27.2	22.7	19.6	17.2	15.4	13.9	12.6	11.6	10.8	10.1	9.4	8.9	8.4	7.9	7.5	7.1	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	5.0	-	-	-	-	70
80	28.4	23.8	20.5	18.0	16.1	14.5	13.2	12.2	11.3	10.5	9.9	9.3	8.8	8.3	7.9	7.6	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	-	-	-	-	80
90	29.6	24.8	21.4	18.8	16.8	15.2	13.8	12.7	11.8	11.0	10.3	9.7	9.2	8.7	8.3	7.9	7.6	7.3	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.6	-	-	-	-	90
100	30.9	25.8	22.3	19.6	17.5	15.8	14.4	13.3	12.3	11.5	10.8	10.2	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.8	-	-	-	-	100
120	33.3	27.9	24.1	21.2	18.9	17.1	15.6	14.4	13.4	12.5	11.7	11.0	10.4	9.9	9.4	9.0	8.6	8.3	8.0	7.7	7.4	7.1	6.9	6.7	6.5	6.3	-	-	-	-	120
140	35.8	30.0	25.8	22.8	20.3	18.4	16.8	15.5	14.4	13.5	12.6	11.9	11.3	10.7	10.2	9.7	9.3	8.9	8.6	8.3	8.0	7.7	7.5	7.3	7.0	6.8	-	-	-	-	140
160	38.2	32.0	27.6	24.3	21.8	19.7	18.0	16.6	15.4	14.4	13.5	12.8	12.1	11.5	10.9	10.5	10.0	9.6	9.3	8.9	8.6	8.3	8.1	7.8	7.6	7.4	-	-	-	-	160
180	40.7	34.1	29.4	25.9	23.2	21.0	19.2	17.7	16.5	15.4	14.5	13.6	12.9	12.3	11.7	11.2	10.7	10.3	9.9	9.5	9.2	8.9	8.6	8.4	8.1	7.9	-	-	-	-	180
200	43.1	36.2	31.2	27.5	24.6	22.3	20.4	18.8	17.5	16.4	15.4	14.5	13.7	13.1	12.5	11.9	11.4	11.0	10.6	10.2	9.8	9.5	9.2	8.9	8.7	8.4	-	-	-	-	200
220	45.6	38.2	33.0	29.1	26.1	23.6	21.6	20.0	18.5	17.3	16.3	15.4	14.6	13.9	13.2	12.6	12.1	11.6	11.2	10.8	10.4	10.1	9.8	9.5	9.2	9.0	-	-	-	-	220
240	48.0	40.3	34.8	30.7	27.5	24.9	22.8	21.1	19.6	18.3	17.2	16.3	15.4	14.6	14.0	13.4	12.8	12.3	11.9	11.4	11.1	10.7	10.4	10.1	9.8	9.5	-	-	-	-	240
260	50.5	42.4	36.6	32.3	28.9	26.2	24.0	22.2	20.6	19.3	18.1	17.1	16.2	15.4	14.7	14.1	13.5	13.0	12.5	12.1	11.7	11.3	10.9	10.6	10.3	10.0	-	-	-	-	260
280	52.9	44.5	38.4	33.9	30.3	27.5	25.2	23.3	21.7	20.3	19.0	18.0	17.1	16.2	15.5	14.8	14.2	13.7	13.2	12.7	12.3	11.9	11.5	11.2	10.9	10.6	-	-	-	-	280
300	55.4	46.5	40.2	35.5	31.8	28.8	26.4	24.4	22.7	21.2	20.0	18.9	17.9	17.0	16.2	15.5	14.9	14.3	13.8	13.3	12.9	12.5	12.1	11.7	11.4	11.1	-	-	-	-	300
320	57.8	48.6	42.0	37.0	33.2	30.1	27.6	25.5	23.7	22.2	20.9	19.7	18.7	17.8	17.0	16.3	15.6	15.0	14.5	14.0	13.5	13.1	12.7	12.3	12.0	11.6	-	-	-	-	320
340	60.3	50.7	43.8	38.6	34.6	31.4	28.8	26.6	24.8	23.2	21.8	20.6	19.5	18.6	17.8	17.0	16.3	15.7	15.1	14.6	14.1	13.7	13.3	12.9	12.5	12.2	-	-	-	-	340
360	62.7	52.7	45.6	40.2	36.1	32.7	30.0	27.7	25.8	24.1	22.7	21.5	20.4	19.4	18.5	17.7	17.0	16.4	15.8	15.2	14.7	14.3	13.8	13.4	13.1	12.7	-	-	-	-	360
380	65.2	54.8	47.4	41.8	37.5	34.0	31.2	28.8	26.8	25.1	23.6	22.3	21.2	20.2	19.3	18.4	17.7	17.0	16.4	15.8	15.3	14.9	14.4	14.0	13.6	13.3	-	-	-	-	380
400	67.6	56.9	49.2	43.4	38.9	35.3	32.4	29.9	27.9	26.1	24.6	23.2	22.0	21.0	20.9	19.2	18.4	17.7	17.1	16.5	15.9	15.4	15.0	14.6	14.2	13.8	-	-	-	-	400
420	70.1	58.9	51.0	45.0	40.3	36.6	33.6	31.0	28.9	27.1	25.5	24.1	22.8	21.8	20.8	19.9	19.1	18.4	17.7	17.1	16.6	16.0	15.6	15.1	14.7	14.3	-	-	-	-	420
440	72.5	61.0	52.7	46.6	41.8	37.9	34.8	32.2	29.9	28.0	26.4	24.9	23.7	22.5	21.5	20.6	19.8	19.0	18.4	17.7	17.2	16.6	16.1	15.7	15.3	14.9	-	-	-	-	440
460	75.0	63.1	54.5	48.2	43.2	39.2	36.0	33.3	31.0	29.0	27.3	25.8	24.5	23.3	22.3	21.3	20.5	19.7	19.0	18.4	17.8	17.2	16.7	16.2	15.8	15.4	-	-	-	-	460
480	77.4	65.1	56.3	49.7	44.6	40.5	37.2	34.4	32.0	30.0	28.2	26.7	25.3	24.1	23.0	22.1	21.2	20.4	19.7	19.0	18.4	17.8	17.3	16.8	16.3	15.9	-	-	-	-	480
500	79.9	67.2	58.1	51.3	46.0	41.8	38.4	35.5	33.0	31.0	29.1	27.6	26.2	24.9	23.8	22.8	21.9	21.1	20.3	19.6	19.0	18.4	17.9	17.4	16.9	16.5	-	-	-	-	500
600	92.1	77.5	67.1	59.3	53.2	48.3	44.3	41.0	38.2	35.8	33.7	31.9	30.3	28.9	27.6	26.4	25.4	24.4	23.6	22.8	22.0	21.4	20.8	20.2	19.6	19.1	-	-	-	-	600
700	104.4	87.9	76.1	67.2	60.3	54.8	50.3	46.6	43.4	40.7	38.3	36.2	34.4	32.8	31.4	30.1	28.9	27.8	26.8	25.9	25.1	24.3	23.6	23.0	22.4	21.8	-	-	-	-	700
800	116.6	98.2	85.0	75.2	67.5	61.3	56.3	52.1	48.6	45.5	42.8	40.6	38.6	36.8	35.1	33.7	32.4	31.2	30.1	29.1	28.2	27.3	26.6	25.8	25.1	24.5	-	-	-	-	800
900	128.9	108.5	94.0	83.1	74.6	67.8	62.3	57.7	53.7	50.4	47.5	44.9	42.7	40.7	38.9	37.3	35.9	34.6	33.3	32.2	31.2	30.3	29.4	28.6	27.8	27.1	-	-	-	-	900
1000	141.1	118.9	103.0	91.0	81.8	74.3	68.3	63.2	58.9	55.3	52.1	49.3	46.8	44.7	42.7	40.9	39.4	37.9	36.6	35.4	34.3	33.2	32.3	31.4	30.5	29.8	-	-	-	-	1000
1100	153.4	129.2	111.9	99.0	88.9	80.8	74.2	68.8	64.1	60.1	56.7	53.6	51.0	48.6	46.5	44.6	42.8	41.3	39.8	38.5	37.3	36.2	35.2	34.2	33.3	32.5	-	-	-	-	1100
1200	165.6	139.5	120.8	106.9	96.0	87.3	80.2	74.3	69.3	65.0	61.2	58.0	55.1	52.6	50.3	48.2	46.3	44.6	43.1	41.7	40.4	39.2	38.1	37.0	36.1	35.2	-	-	-	-	1200
1300	177.9	149.9	129.9	114.9	103.2	93.8	86.2	79.8	74.5	69.8	65.8	62.3	59.2	56.5	54.0	51.8	49.8	48.0	46.4	44.8	43.4	42.1	40.9	39.8	38.8	37.8	-	-	-	-	1300
1400	190.1	160.2	138.8	122.8	110.3	100.3	92.2	85.4	79.6	74.7	70.4	66.7	63.4	60.4	57.8	55.5	53.3	51.4	49.6	48.0	46.5	45.1	43.8	42.6	41.5	40.5	-	-	-	-	1400
1500	202.4	170.5	147.8	130.7	117.5	106.9	98.2	90.9	84.8	79.6	75.0	71.0	67.5	64.4	61.6	59.1	56.8	54.7	52.9	51.1	49.5	48.1	46.7	45.4	44.3	43.2	-	-	-	-	1500
1600	214.6	180.9	156.8	138.7	124.6	113.4	104.1	96.5	90.0	84.4	79.6	75.4	71.7	68.3	65.4	62.7	60.3	58.1	56.1	54.3	52.6	51.0	49.6	48.3	47.0	45.8	-	-	-	-	1600
1700	226.9	191.2	165.7	146.6	131.7	119.9	110.1	102.0	95.2	89.3	84.2	79.7	75.8	72.3	69.2	66.4	63.8	61.5	59.4	57.4	55.6	54.0	52.5	51.1	49.7	48.5	-	-	-	-	1700
1800	239.1	201.5	174.7	154.6	138.9	126.4	116.1	107.6	100.3	94.1	88.8	84.1	79.9	76.2	72.9	70.0	67.3	64.8	62.6	60.6	58.7	57.0	55.4	53.9	52.5	51.2	-	-	-	-	1800
1900	251.4	211.9	183.7	162.5	146.0	132.9	122.1	113.1	105.5	99.0	93.4	88.4	84.1	80.2	76.7	73.6	70.8	68.2	65.9	63.7	61.8	60.0	58.2	56.7	55.2	53.9	-	-	-	-	1900
2000	263.6	222.2	192.6	170.4	153.2	139.4	128.1	118.7	110.7	103.9	97.9	92.8	88.2	84.1	80.5	77.2	74.3	71.6	69.1	66.9	64.8	62.9	61.1	59.5	58.0	56.5	-	-	-	-	2000
2100	275.9	232.5	201.6	178.4	160.3	145.9	134.1	124.2	115.9	108.7	102.6	97.1	92.3	88.1	84.3	80.9	77.8	75.0	72.4	70.0	67.9	65.9	64.0	62.3	60.7	59.2	-	-	-	-	2100
2200	288.1	242.9	210.6	186.3	167.5	152.4	140.0	129.7	121.0	113.6	107.1	101.5	96.5	92.0	88.1	84.5	81.3	78.3	75.6	73.2	70.9	68.8	66.9	65.1	63.4	61.9	-	-	-	-	2200
2300	300.4	253.2	219.5	194.3	174.6	158.9	146.0	135.3	126.2	118.4	111.7	105.8	100.6	96.0	91.8	88.1	84.8	81.7	78.9	76.3	74.0	71.8	69.8	67.9	66.2	64.5	-	-	-	-	2300
2400	312.6	263.6	228.5	202.2	181.7	165.4	152.0	140.8	131.4	123.3	116.3	110.2	104.7	99.9	95.6	91.8	88.2	85.1	82.1	79.5	77.0	74.8	72.7	70.7	68.9	67.2	-	-	-	-	2400
2500	324.9	273.9	237.5	210.1	188.9	171.9	158.0	146.4	136.6	128.2	120.9	114.5	108.9	103.9	99.4	95.4	91.7	88.4	85.4	82.6	80.1	77.7	75.5	73.5	71.6	70.0	-	-	-	-	2500
2600	337.1	284.2	246.4	218.1	196.0	178.4	164.0	151.9	141.7	133.0	125.5	118.9	113.0	107.8	103.2	99.0	95.2	91.8	88.7	85.8	83.1	80.7	78.4	76.3	74.4	72.5	-	-	-	-	2600
2700	349.4	294.6	255.4	226.0	203.2	184.9	169.9	157.5	146.9	137.9	130.1	123.2	117.2	111.8	107.0	102.6	98.7	95.2	91.9	88.9	86.2	83.7	81.3	79.1	77.1	75.2	-	-	-	-	2700
2800	361.6	304.9	264.4	234.0	210.3	191.4	175.9	163.0	152.1	142.7	134.6	127.5	121.3	115.7	110.7	106.3	102.2	98.5	95.2	92.1	89.2	86.6	84.2	81.9	79.8	77.9	-	-	-	-	2800
2900	373.9	315.2	273.3	241.9	217.5	197.9	181.9	168.6	157.3	147.6	139.2	131.9	125.4	119.7	114.5	109.9	105.7	101.9	98.4	95.2	92.3	89.6	87.1	84.8	82.6	80.6	-	-	-	-	2900
3000	386.1	325.6	282.3	249.8	224.6	204.4	187.9	174.1	162.5	152.5	143.8	136.2	129.6	123.6	118.3	113.5	109.2	105.3	101.7	98.4	95.3	92.6	90.0	87.6	85.3	83.2	-	-	-	-	3000
3100	398.4	335.9	291.3	257.8	231.7	210.9	193.9	179.7	167.6	157.3	148.4	140.6	133.7	127.6	122.1	117.2	112.7	108.6	104.9	101.5	98.4	95.5	92.8	90.4	88.1	85.9	-	-	-	-	3100
3200	410.6	346.2	300.2	265.7	238.9	217.4	199.8	185.2	172.8	162.2	153.0	144.9	137.8	131.5	125.9	120.8	116.2	112.0	108.2	104.7	101.5	98.5	95.7	93.2	90.8	88.6	-	-	-	-	3200
3300	422.9	356.6	309.2	273.7	246.0	223.9	205.8	190.7	178.0	167.1	157.6	149.3	142.0	135.5	129.6	124.4	119.7	115.4	111.4	107.8	104.5	101.5	98.6	96.0	93.5	91.2	-	-	-	-	3300
3400	435.1	366.9	318.2	281.6	253.2	230.4	211.8	196.3	183.2	171.9	162.2	153.6	146.1	139.4	133.4	128.0	123.2	118.7	114.7	111.0	107.6	104.4	101.5	98.8	96.3	93.9	-	-	-	-	3400
3500	447.4	377.2	327.1	289.5	260.3	236.9	217.8	201.8	188.3	176.8	166.8	158.0	150.2	143.4	137.2	131.7	126.7	122.1	117.9	114.1	110.6	107.4	104.4	101.6	99.0	96.6	-	-	-	-	3500
Term. 2/	18.614	15.512	13.296	11.634	10.341	9.307	8.461	7.756	7.159	6.648	6.205	5.817	5.475	5.171	4.898	4.654	4.432	4.230	4.047	3.878	3.723	3.580	3.447	3.324	3.209	3.102	-	-	-	-	Term. 2/
L. H. 3/	.122510	.103350	.089664	.079400	.071417	.065030	.059805	.055450	.051765	.048607	.045870	.043475	.041362	.039483	.037803	.036290	.034921	.033677	.032541	.031500	.030542	.029658	.028839	.028079	.027371	.026710	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 20.4 tons and a ratio of empty car miles to loaded car miles of 0.919. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

TABLE 83.—TERRITORY NO. 12 - TOTAL UNITED STATES

CARLOAD COST SCALES FOR COMMODITIES MOVING IN REFRIGERATOR CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																												Miles
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
10	17.3	14.4	12.4	10.8	9.6	8.7	7.9	7.2	6.7	6.2	5.8	5.5	5.1	4.9	4.6	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.0	2.9	-	-	-	-	10
20	18.8	15.7	13.5	11.8	10.5	9.5	8.6	7.9	7.3	6.8	6.4	6.0	5.6	5.3	5.1	4.8	4.6	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.4	3.3	-	-	-	-	20
30	20.3	17.0	14.6	12.8	11.4	10.3	9.4	8.6	7.9	7.4	6.9	6.5	6.1	5.8	5.5	5.2	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.5	-	-	-	-	30
40	21.8	18.2	15.7	13.7	12.2	11.1	10.1	9.3	8.6	8.0	7.5	7.0	6.6	6.3	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.9	-	-	-	-	40
50	23.3	19.5	16.8	14.7	13.1	11.8	10.8	9.9	9.2	8.6	8.0	7.5	7.1	6.7	6.4	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	-	-	-	-	50
60	24.8	20.8	17.9	15.7	14.0	12.6	11.5	10.6	9.8	9.2	8.6	8.1	7.6	7.2	6.9	6.5	6.3	6.0	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.5	-	-	-	-	60
70	26.3	22.0	19.0	16.6	14.9	13.4	12.3	11.3	10.4	9.7	9.1	8.6	8.1	7.7	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	-	-	-	-	70
80	27.8	23.3	20.0	17.6	15.7	14.2	13.0	11.9	11.1	10.3	9.7	9.1	8.6	8.2	7.8	7.4	7.1	6.8	6.5	6.3	6.0	5.8	5.6	5.5	5.3	5.1	-	-	-	-	80
90	29.3	24.6	21.1	18.6	16.6	15.0	13.7	12.6	11.7	10.9	10.2	9.6	9.1	8.6	8.2	7.8	7.5	7.2	6.9	6.6	6.4	6.2	6.0	5.8	5.6	5.5	-	-	-	-	90
100	30.8	25.8	22.2	19.6	17.5	15.8	14.4	13.3	12.3	11.5	10.8	10.2	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.8	-	-	-	-	100
120	33.8	28.4	24.4	21.5	19.2	17.4	15.9	14.6	13.6	12.7	11.9	11.2	10.6	10.1	9.6	9.1	8.7	8.4	8.1	7.8	7.5	7.2	7.0	6.8	6.6	6.4	-	-	-	-	120
140	36.8	30.9	26.6	23.4	20.9	19.0	17.3	16.0	14.8	13.8	13.0	12.2	11.6	11.0	10.5	10.0	9.6	9.2	8.8	8.5	8.2	7.9	7.7	7.4	7.2	7.0	-	-	-	-	140
160	39.9	33.4	28.8	25.4	22.7	20.5	18.8	17.3	16.1	15.0	14.1	13.3	12.6	11.9	11.4	10.9	10.4	10.0	9.6	9.3	8.9	8.6	8.4	8.1	7.9	7.6	-	-	-	-	160
180	42.9	35.9	31.0	27.3	24.4	22.1	20.2	18.7	17.3	16.2	15.2	14.3	13.6	12.9	12.3	11.7	11.2	10.8	10.4	10.0	9.7	9.3	9.0	8.8	8.5	8.2	-	-	-	-	180
200	45.9	38.5	33.2	29.2	26.2	23.7	21.7	20.0	18.6	17.4	16.3	15.4	14.6	13.8	13.2	12.6	12.1	11.6	11.2	10.8	10.4	10.0	9.7	9.4	9.2	8.9	-	-	-	-	200
220	48.9	41.0	35.4	31.2	27.9	25.3	23.1	21.3	19.8	18.5	17.4	16.4	15.5	14.8	14.1	13.5	12.9	12.4	11.9	11.5	11.1	10.7	10.4	10.1	9.8	9.5	-	-	-	-	220
240	51.9	43.5	37.6	33.1	29.6	26.9	24.6	22.7	21.1	19.7	18.5	17.5	16.5	15.7	15.0	14.3	13.7	13.2	12.7	12.2	11.8	11.4	11.1	10.8	10.4	10.2	-	-	-	-	240
260	54.9	46.1	39.8	35.0	31.4	28.4	26.0	24.0	22.3	20.9	19.6	18.5	17.5	16.7	15.9	15.2	14.6	14.0	13.5	13.0	12.5	12.1	11.8	11.4	11.1	10.8	-	-	-	-	260
280	57.9	48.6	42.0	37.0	33.1	30.0	27.5	25.4	23.6	22.0	20.7	19.5	18.5	17.6	16.8	16.1	15.4	14.8	14.2	13.7	13.3	12.8	12.4	12.1	11.7	11.4	-	-	-	-	280
300	60.9	51.1	44.2	38.9	34.8	31.6	28.9	26.7	24.8	23.2	21.8	20.6	19.5	18.6	17.7	16.9	16.2	15.6	15.0	14.5	14.0	13.5	13.1	12.7	12.4	12.0	-	-	-	-	300
320	63.9	53.7	46.3	40.9	36.6	33.2	30.4	28.0	26.1	24.4	22.9	21.6	20.5	19.5	18.6	17.8	17.1	16.4	15.8	15.2	14.7	14.2	13.8	13.4	13.0	12.7	-	-	-	-	320
340	66.9	56.2	48.5	42.8	38.3	34.7	31.8	29.4	27.3	25.6	24.0	22.7	21.5	20.4	19.5	18.7	17.9	17.2	16.6	16.0	15.4	14.9	14.5	14.1	13.7	13.3	-	-	-	-	340
360	69.9	58.7	50.7	44.7	40.1	36.3	33.3	30.7	28.6	26.7	25.1	23.7	22.5	21.4	20.4	19.5	18.7	18.0	17.3	16.7	16.2	15.6	15.2	14.7	14.3	13.9	-	-	-	-	360
380	72.9	61.3	52.9	46.7	41.8	37.9	34.7	32.1	29.8	27.9	26.2	24.8	23.5	22.3	21.3	20.4	19.6	18.8	18.1	17.5	16.9	16.3	15.8	15.4	15.0	14.5	-	-	-	-	380
400	76.0	63.8	55.1	48.6	43.5	39.5	36.2	33.4	31.1	29.1	27.3	25.8	24.5	23.3	22.2	21.3	20.4	19.6	18.9	18.2	17.6	17.0	16.5	16.0	15.6	15.2	-	-	-	-	400
420	79.0	66.3	57.3	50.5	45.3	41.1	37.6	34.8	32.3	30.2	28.4	26.9	25.5	24.2	23.1	22.1	21.2	20.4	19.6	19.0	18.3	17.7	17.2	16.7	16.2	15.8	-	-	-	-	420
440	82.0	68.9	59.5	52.5	47.0	42.6	39.1	36.1	33.6	31.4	29.5	27.9	26.5	25.2	24.0	23.0	22.0	21.2	20.4	19.7	19.1	18.4	17.9	17.4	16.9	16.4	-	-	-	-	440
460	85.0	71.4	61.7	54.4	48.8	44.2	40.5	37.4	34.8	32.6	30.6	28.9	27.4	26.1	24.9	23.8	22.9	22.0	21.2	20.5	19.8	19.1	18.6	18.0	17.5	17.1	-	-	-	-	460
480	88.0	73.9	63.9	56.4	50.5	45.8	42.0	38.8	36.1	33.8	31.7	30.0	28.4	27.1	25.8	24.7	23.7	22.8	22.0	21.2	20.5	19.8	19.2	18.7	18.2	17.7	-	-	-	-	480
500	91.0	76.5	66.1	58.3	52.2	47.4	43.4	40.1	37.3	34.9	32.8	31.0	29.4	28.0	26.7	25.6	24.5	23.6	22.7	21.9	21.2	20.5	19.9	19.4	18.8	18.3	-	-	-	-	500
600	106.0	89.1	77.0	68.0	60.9	55.3	50.7	46.8	43.6	40.8	38.4	36.3	34.4	32.7	31.2	29.9	28.7	27.6	26.6	25.7	24.8	24.1	23.3	22.7	22.0	21.4	-	-	-	-	600
700	121.1	101.8	88.0	77.7	69.6	63.2	57.9	53.5	49.8	46.6	43.9	41.5	39.3	37.4	35.6	34.2	32.9	31.6	30.5	29.4	28.4	27.6	26.7	26.0	25.2	24.6	-	-	-	-	700
800	136.1	114.4	99.0	87.3	78.3	71.1	65.2	60.2	56.1	52.5	49.4	46.7	44.3	42.2	40.3	38.6	37.0	35.6	34.3	33.1	32.1	31.1	30.1	29.3	28.5	27.7	-	-	-	-	800
900	151.2	127.1	109.9	97.0	87.0	79.0	72.4	66.9	62.3	58.4	54.9	51.9	49.3	46.9	44.8	42.9	41.2	39.6	38.2	36.9	35.7	34.6	33.5	32.6	31.7	30.9	-	-	-	-	900
1000	166.2	139.8	120.9	106.7	95.7	86.9	79.7	73.7	68.6	64.2	60.4	57.1	54.2	51.6	49.3	47.2	45.3	43.6	42.0	40.6	39.3	38.1	36.9	35.9	34.9	34.0	-	-	-	-	1000
1100	181.2	152.4	131.8	116.4	104.4	94.8	86.9	80.4	74.8	70.1	66.0	62.3	59.2	56.3	53.8	51.5	49.5	47.6	45.9	44.3	42.9	41.6	40.3	39.2	38.1	37.1	-	-	-	-	1100
1200	196.3	165.1	142.8	126.1	113.1	102.7	94.2	87.1	81.1	75.9	71.5	67.6	64.1	61.1	58.3	55.9	53.6	51.6	49.8	48.1	46.5	45.1	43.7	42.5	41.3	40.3	-	-	-	-	1200
1300	211.3	177.7	153.7	135.8	121.8	110.6	101.4	93.8	87.3	81.8	77.0	72.8	69.1	65.8	62.8	60.2	57.8	55.6	53.6	51.8	50.1	48.6	47.1	45.8	44.6	43.4	-	-	-	-	1300
1400	226.4	190.4	164.7	145.4	130.5	118.5	108.7	100.5	93.6	87.6	82.5	78.0	74.0	70.5	67.4	64.5	61.9	59.6	57.5	55.5	53.7	52.1	50.5	49.1	47.8	46.5	-	-	-	-	1400
1500	241.4	203.1	175.7	155.1	139.1	126.4	115.9	107.2	99.8	93.5	88.0	83.2	79.0	75.2	71.9	68.8	66.1	63.6	61.3	59.3	57.3	55.6	53.9	52.4	51.0	49.7	-	-	-	-	1500
1600	256.4	215.7	186.6	164.8	147.8	134.3	123.2	113.9	106.1	99.4	93.5	88.4	84.0	80.0	76.4	73.2	70.3	67.6	65.2	63.0	61.0	59.1	57.3	55.7	54.2	52.8	-	-	-	-	1600
1700	271.5	228.4	197.6	174.5	156.5	142.2	130.4	120.6	112.3	105.2	99.1	93.7	88.9	84.7	80.9	77.5	74.4	71.6	69.1	66.7	64.6	62.6	60.7	59.0	57.4	55.9	-	-	-	-	1700
1800	286.5	241.0	208.5	184.2	165.2	150.1	137.7	127.3	118.6	111.1	104.6	98.9	93.9	89.4	85.4	81.8	78.6	75.6	72.9	70.5	68.2	66.1	64.1	62.3	60.6	59.1	-	-	-	-	1800
1900	301.6	253.7	219.5	193.9	173.9	158.0	144.9	134.0	124.8	116.9	110.1	104.1	98.8	94.1	89.9	86.2	82.7	79.6	76.8	74.2	71.8	69.6	67.5	65.6	63.9	62.2	-	-	-	-	1900
2000	316.6	266.4	230.5	203.5	182.6	165.9	152.1	140.7	131.1	122.8	115.6	109.3	103.8	98.9	94.4	90.5	86.9	83.6	80.6	77.9	75.4	73.1	70.9	68.9	67.1	65.4	-	-	-	-	2000
2100	331.7	279.0	241.4	213.2	191.3	173.8	159.4	147.4	137.3	128.6	121.1	114.5	108.7	103.6	99.0	94.8	91.0	87.6	84.5	81.6	79.0	76.6	74.3	72.2	70.3	68.5	-	-	-	-	2100
2200	346.7	291.7	252.4	222.9	200.0	181.7	166.6	154.1	143.6	134.5	126.6	119.8	113.7	108.3	103.5	99.1	95.2	91.6	88.4	85.4	82.6	80.1	77.7	75.6	73.5	71.6	-	-	-	-	2200
2300	361.7	304.3	263.3	232.6	208.7	189.6	173.9	160.9	149.8	140.4	132.2	125.0	118.7	113.0	108.0	103.5	99.4	95.6	92.2	89.1	86.2	83.6	81.1	78.9	76.7	74.8	-	-	-	-	2300
2400	376.8	317.0	274.3	242.5	217.4	197.4	181.1	167.6	156.1	146.2	137.7	130.2	123.6	117.7	112.5	107.8	103.5	99.6	96.1	92.8	89.9	87.1	84.5	82.2	80.0	77.9	-	-	-	-	2400
2500	391.8	329.7	285.3	252.0	226.1	205.3	188.4	174.3	162.3	152.1	143.2	135.4	128.6	122.5	117.0	112.1	107.7	103.6	100.0	96.6	93.5	90.6	87.9	85.5	83.2	81.0	-	-	-	-	2500
2600	406.9	342.3	296.2	261.6	234.8	213.2	195.6	181.0	168.6	157.9	148.7	140.6	133.5	127.2	121.5	116.4	111.8	107.6	103.8	100.3	97.1	94.1	91.3	88.8	86.4	84.2	-	-	-	-	2600
2700	421.9	355.0	307.2	271.3	243.4	221.1	202.9	187.7	174.8	163.8	154.2	145.9	138.5	131.9	126.0	120.8	116.0	111.6	107.7	104.0	100.7	97.6	94.7	92.1	89.6	87.3	-	-	-	-	2700
2800	436.9	367.6	318.1	281.0	252.1	229.0	210.1	194.4	181.1	169.6	159.7	151.1	143.4	136.6	130.6	125.1	120.1	115.6	111.5	107.8	104.3	101.1	98.1	95.4	92.8	90.4	-	-	-	-	2800
2900	452.0	380.3	329.1	290.7	260.8	236.9	217.4	201.1	187.3	175.5	165.3	156.3	148.4	141.4	135.1	129.4	124.3	119.6	115.4	111.5	107.9	104.6	101.5	98.7	96.0	93.6	-	-	-	-	2900
3000	467.0	393.0	340.1	300.4	269.5	244.8	224.6	207.8	193.6	181.4	170.8	161.5	153.3	146.1	139.6	133.7	128.5	123.6	119.3	115.2	111.5	108.1	104.9	102.0	99.3	96.7	-	-	-	-	3000
3100	482.1	405.6	351.0	310.1	278.2	252.7	231.9	214.5	199.8	187.2	176.3	166.7	158.3	150.8	144.1	138.1	132.6	127.6	123.1	119.0	115.1	111.6	108.3	105.3	102.5	99.8	-	-	-	-	3100
3200	497.1	418.3	362.0	319.8	286.9	260.6	239.1	221.2	206.1	193.1	181.8	172.0	163.3	155.5	148.6	142.4	136.8	131.6	127.0	122.7	118.7	115.1	111.7	108.6	105.7	103.0	-	-	-	-	3200
3300	512.1	430.9	372.9	329.4	295.6	268.5	246.4	227.9	212.3	198.9	187.3	177.2	168.2	160.3	153.1	146.7	140.9	135.6	130.8	126.4	122.4	118.6	115.1	111.9	108.9	106.1	-	-	-	-	3300
3400	527.2	443.6	383.9	339.1	304.3	276.4	253.6	234.6	218.6	204.8	192.8	182.4	173.2	165.0	157.6	151.0	145.1	139.7	134.7	130.2	126.0	122.1	118.5	115.2	112.1	109.3	-	-	-	-	3400
3500	542.2	456.3	394.9	348.8	313.0	284.3	260.9	241.3	224.8	210.6	198.4	187.6	178.1	169.7	162.2	155.4	149.2	143.7	138.6	133.9	129.6	125.6	121.9	118.5	115.4	112.4	-	-	-	-	3500
Term. 2/	15.790	13.158	11.279	9.869	8.772	7.895	7.177	6.579	6.073	5.639	5.263	4.934	4.644	4.386	4.155	3.948	3.760	3.589	3.433	3.290	3.158	3.037	2.924	2.820	2.722	2.632	-	-	-	-	Term. 2/
L. H. 3/	.150410	.126600	.109593	.096838	.086917	.078980	.072486	.067075	.062496	.058571	.055170	.052194	.049568	.047233	.045145	.043265	.041564	.040018	.038607	.037313	.036122	.035023	.034006	.033061	.032181	.031360	-	-	-	-	L. H. 3/

1/ Based on a tare weight of 27.3 tons and a ratio of empty car miles to loaded car miles of 0.795. The Carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.

For Cost Level III(a), Carload operating expenses, rents and taxes, plus a return at 4 percent upon the carload portion of the value, multiply by 1.21.

For Cost Level III(b), Carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the carload portion of the value, multiply by 1.31.

For Cost Level IV, Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, but excluding return, multiply by 1.17.

For Cost Level V(a), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.50.

For Cost Level V(b), Carload operating expenses, rents and taxes, plus the passenger and less-carload operating deficits, and a return at 5-3/4 percent upon the total value, including the less-carload and passenger portion, multiply by 1.65.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds by commodity groups and by territories. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

Territory No. 12 - Total United States

LESS-CARLOAD

TABLE 84.--TERRITORY NO. 12 - TOTAL UNITED STATES

LESS-CARLOAD COST SCALES BASED ON SHIPMENTS MOVING IN BOX CARS

Cost in Cents per Hundred Pounds, Based on Freight Operating Expenses, Rents and Taxes for 1939 1/

Miles	Net load in tons per car																											Miles
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	
10	81.6	66.0	56.8	51.2	47.5	44.8	42.8	41.1	40.1	39.1	38.2	37.5	36.9	36.4	35.9	35.5	35.1	34.8	34.5	34.2	34.0	33.8	33.6	33.4	33.2	33.1	32.9	32.8	32.6	10
20	89.6	69.4	59.4	53.3	49.3	46.4	44.2	42.6	41.7	40.1	39.2	38.4	37.8	37.2	36.7	36.2	35.8	35.5	35.2	34.9	34.6	34.4	34.2	34.0	33.8	33.6	33.4	33.3	33.2	20
30	94.6	72.9	62.0	55.4	51.1	48.0	45.6	43.8	42.4	41.2	40.2	39.4	38.6	38.0	37.5	37.0	36.6	36.2	35.8	35.5	35.2	35.0	34.8	34.5	34.3	34.1	34.0	33.8	33.7	30
40	99.6	76.3	64.6	57.6	52.9	49.5	47.0	45.1	43.5	42.3	41.2	40.3	39.5	38.8	38.3	37.8	37.3	36.9	36.5	36.2	35.9	35.6	35.3	35.1	34.9	34.7	34.5	34.3	34.2	40
50	104.7	79.7	67.2	59.7	54.7	51.1	48.4	46.3	44.7	43.3	42.2	41.2	40.4	39.7	39.1	38.5	38.0	37.6	37.2	36.8	36.5	36.2	35.9	35.7	35.5	35.2	35.0	34.9	34.7	50
60	109.7	83.1	69.8	61.8	56.5	52.7	49.8	47.6	45.8	44.4	43.2	42.2	41.3	40.5	39.8	39.3	38.7	38.3	37.9	37.5	37.1	36.8	36.5	36.3	36.0	35.8	35.6	35.4	35.2	60
70	114.7	86.5	72.4	63.9	58.3	54.2	51.2	48.9	47.0	45.4	44.2	43.1	42.1	41.3	40.6	40.0	39.5	39.0	38.5	38.1	37.8	37.4	37.1	36.8	36.6	36.3	36.1	35.9	35.7	70
80	119.7	89.9	75.0	66.0	60.1	55.8	52.6	50.1	48.1	46.5	45.2	44.0	43.0	42.2	41.4	40.8	40.2	39.7	39.2	38.8	38.4	38.0	37.7	37.4	37.1	36.9	36.6	36.4	36.2	80
90	124.7	93.3	77.6	68.2	61.9	57.4	54.0	51.4	49.3	47.6	46.1	44.9	43.9	43.0	42.2	41.5	40.9	40.4	39.9	39.4	39.0	38.6	38.3	38.0	37.7	37.4	37.2	36.9	36.7	90
100	129.8	96.7	80.2	70.3	63.7	58.9	55.4	52.7	50.4	48.6	47.1	45.8	44.8	43.8	43.0	42.3	41.6	41.1	40.5	40.1	39.6	39.2	38.9	38.5	38.2	38.0	37.7	37.5	37.2	100
120	139.8	103.5	85.4	74.5	67.3	62.1	58.2	55.2	52.8	50.8	49.1	47.7	46.5	45.5	44.6	43.8	43.1	42.4	41.9	41.4	40.9	40.5	40.1	39.7	39.4	39.1	38.8	38.5	38.2	120
140	149.8	110.3	90.6	78.8	70.9	65.4	61.0	57.7	55.1	52.9	51.1	49.6	48.3	47.2	46.2	45.3	44.5	43.8	43.2	42.6	42.1	41.7	41.2	40.8	40.5	40.1	39.8	39.5	39.3	140
160	159.9	117.2	95.8	83.0	74.6	68.3	63.8	60.2	57.4	55.0	53.1	51.5	50.0	48.8	47.8	46.8	46.0	45.2	44.6	43.9	43.3	42.9	42.4	42.0	41.6	41.2	40.9	40.6	40.3	160
180	169.9	124.0	101.0	87.2	78.0	71.6	67.6	62.7	59.7	57.2	55.1	53.3	51.8	50.5	49.3	48.3	47.4	46.6	45.9	45.2	44.6	44.1	43.6	43.1	42.7	42.3	42.0	41.6	41.3	180
200	179.9	130.8	106.2	91.5	81.6	74.6	69.4	65.3	62.0	59.3	57.1	55.2	53.6	52.1	50.9	49.8	48.9	48.0	47.2	46.5	45.9	45.3	44.8	44.3	43.8	43.4	43.0	42.7	42.3	200
220	190.0	137.6	111.4	95.7	85.2	77.8	72.1	67.8	64.3	61.4	59.0	57.0	55.3	53.8	52.5	51.3	50.3	49.4	48.6	47.8	47.1	46.5	46.0	45.4	44.9	44.5	44.1	43.7	43.3	220
240	200.0	144.4	116.6	100.0	88.8	80.9	74.9	70.3	66.6	63.6	61.0	58.9	57.1	55.6	54.1	52.9	51.8	50.8	49.9	49.1	48.4	47.7	47.1	46.6	46.1	45.6	45.1	44.7	44.4	240
260	210.1	151.2	121.8	104.2	92.4	84.0	77.7	72.8	68.9	65.7	63.0	60.8	58.8	57.1	55.7	54.4	53.2	52.2	51.3	50.4	49.6	49.0	48.3	47.7	47.2	46.7	46.2	45.8	45.4	260
280	220.1	158.1	127.0	108.4	96.0	87.2	80.5	75.3	71.2	67.8	65.0	62.6	60.6	58.8	57.2	55.9	54.7	53.6	52.6	51.7	50.9	50.2	49.5	48.9	48.3	47.8	47.3	46.8	46.4	280
300	230.1	164.9	132.2	112.7	99.6	90.3	83.3	77.9	73.5	70.0	67.0	64.5	62.3	60.5	58.8	57.4	56.1	55.0	53.9	53.0	52.2	51.4	50.7	50.0	49.4	48.9	48.3	47.9	47.4	300
320	240.2	171.7	137.4	116.9	103.2	93.4	86.1	80.4	75.8	72.1	69.0	66.3	64.1	62.1	60.4	58.9	57.6	56.4	55.3	54.3	53.4	52.6	51.8	51.2	50.5	49.9	49.4	48.9	48.4	320
340	250.2	178.5	142.7	121.1	106.8	96.6	88.9	82.9	78.1	74.2	71.0	68.2	65.8	63.8	62.0	60.4	59.0	57.7	56.6	55.6	54.7	53.8	53.0	52.3	51.6	51.0	50.5	49.9	49.4	340
360	260.2	185.3	147.9	125.4	110.4	99.7	91.7	85.4	80.4	76.3	72.9	70.1	67.6	65.4	63.6	61.9	60.4	59.1	58.0	56.9	55.9	55.0	54.2	53.5	52.8	52.1	51.5	51.0	50.5	360
380	270.3	192.1	153.1	129.6	114.0	102.8	94.5	87.9	82.7	78.5	74.9	71.9	69.3	67.1	65.2	63.4	61.9	60.5	59.3	58.2	57.2	56.2	55.4	54.6	53.9	53.2	52.6	52.0	51.5	380
400	280.3	199.0	158.3	133.9	117.6	106.0	97.2	90.5	85.0	80.6	76.9	73.8	71.1	68.8	66.7	64.9	63.3	61.9	60.6	59.5	58.4	57.5	56.6	55.8	55.0	54.3	53.7	53.1	52.5	400
420	290.4	205.8	163.5	138.1	121.2	109.1	100.0	93.0	87.3	82.7	78.9	75.6	72.8	70.4	68.3	66.5	64.8	63.3	62.0	60.7	59.7	58.7	57.7	56.9	56.1	55.4	54.7	54.1	53.5	420
440	300.4	212.6	168.7	142.3	124.8	112.2	102.8	95.5	89.7	84.9	80.9	77.5	74.6	72.1	69.9	68.0	66.2	64.7	63.3	62.1	60.9	59.9	58.9	58.0	57.2	56.5	55.8	55.1	54.5	440
460	310.4	219.4	173.9	146.6	128.4	115.4	105.6	98.0	92.0	87.0	82.9	79.4	76.4	73.8	71.5	69.5	67.7	66.1	[redacted]	63.4	62.2	61.1	60.1	59.2	58.4	57.5	56.8	56.2	55.5	460
480	320.5	226.2	179.1	150.8	132.0	118.8	108.4	100.6	94.3	89.1	84.8	81.2	78.1	75.4	73.1	71.0	69.1	67.5	66.0	64.6	63.4	62.3	61.3	60.3	59.5	58.7	57.9	57.2	56.6	480
500	330.5	233.0	184.3	155.1	135.6	121.6	111.2	103.1	96.6	91.3	86.8	83.1	79.9	77.1	74.6	72.5	70.6	68.9	67.4	65.9	64.7	63.5	62.5	61.5	60.6	59.8	59.0	58.3	57.8	500
600	380.7	267.1	210.3	176.3	153.5	137.3	125.1	115.7	108.2	101.9	96.7	92.4	88.6	85.4	82.6	80.0	77.8	75.8	74.0	72.4	70.9	69.6	68.4	67.2	66.2	65.2	64.3	63.5	62.7	600
700	430.9	301.2	236.4	197.5	171.5	153.0	139.1	128.3	119.6	112.6	106.7	101.7	97.4	93.7	90.5	87.6	85.1	82.8	81.0	78.9	77.2	75.7	74.3	73.0	71.8	70.6	69.5	68.7	67.8	700
800	481.1	335.3	261.4	218.7	189.5	168.7	153.0	140.9	131.2	123.2	116.6	111.0	106.2	102.0	98.4	95.2	92.3	89.7	87.4	85.4	83.5	81.7	80.1	78.7	77.3	76.1	74.9	73.9	72.9	800
900	531.3	369.4	288.4	239.9	207.5	184.3	167.0	153.5	142.7	133.9	125.5	120.3	114.9	110.3	106.3	102.7	99.5	96.7	94.1	91.8	89.7	87.8	86.0	84.4	82.9	81.5	80.3	79.1	77.9	900
1000	581.5	403.5	314.4	261.1	225.4	200.0	180.9	166.1	154.2	144.5	136.4	129.6	123.7	118.6	114.2	110.3	106.8	103.7	100.8	98.3	96.0	93.9	91.9	90.2	88.5	87.0	85.6	84.3	83.0	1000
1100	631.6	437.5	340.5	282.2	243.4	215.7	194.9	178.7	165.8	155.2	146.4	138.9	132.5	126.9	122.1	117.8	114.0	110.6	107.5	104.8	102.2	99.9	97.8	95.9	94.1	92.4	90.9	89.5	88.1	1100
1200	681.8	471.6	366.6	303.4	261.4	231.4	208.8	191.3	177.3	166.8	156.3	148.2	141.3	135.3	130.0	125.4	121.2	117.6	114.2	111.2	108.5	106.0	103.7	101.6	99.7	97.9	96.2	94.7	93.2	1200
1300	732.0	505.7	392.6	324.6	279.4	247.0	222.8	203.9	188.8	176.5	166.2	157.5	150.0	143.6	137.9	132.9	128.5	124.5	120.9	117.7	114.8	112.1	109.6	107.4	105.3	103.3	101.5	100.0	98.3	1300
1400	782.2	539.8	418.6	345.8	297.3	262.7	236.7	216.5	200.4	187.1	176.1	166.8	158.8	151.9	145.8	140.5	135.7	131.5	127.6	124.2	121.0	118.2	115.5	113.1	110.9	108.8	106.8	105.1	103.4	1400
1500	832.4	573.9	444.6	367.0	315.3	278.4	250.7	229.1	211.9	197.8	186.0	176.1	167.6	160.2	153.7	148.0	143.0	138.4	134.3	130.6	127.3	124.2	121.4	118.8	116.4	114.2	112.2	110.3	108.5	1500
1600	882.6	608.0	470.6	388.2	333.3	294.1	264.6	241.7	223.4	208.5	196.0	185.4	176.3	168.5	161.6	155.6	150.2	145.4	141.0	137.1	133.5	130.3	127.3	124.6	122.0	119.7	117.5	115.5	113.6	1600
1700	932.8	642.0	496.6	409.4	351.3	309.7	278.6	254.3	235.0	219.1	205.9	194.7	185.1	176.9	169.5	163.1	157.4	152.3	147.7	143.6	139.8	136.4	133.2	130.3	127.6	125.1	122.8	120.7	118.7	1700
1800	983.0	676.1	522.7	430.6	369.2	325.4	292.5	267.0	246.5	229.8	215.8	204.0	193.9	185.1	177.4	170.7	164.7	159.3	154.4	150.1	146.0	142.4	139.1	136.0	133.2	130.6	128.1	125.9	123.7	1800
1900	1,033.1	710.2	548.7	451.8	387.2	341.1	306.5	279.6	258.0	240.4	225.7	213.3	202.7	193.4	185.4	178.2	171.9	166.2	161.1	156.5	152.3	148.5	145.0	141.8	138.8	136.0	133.4	131.1	128.8	1900
2000	1,083.3	744.3	574.7	473.0	405.2	356.8	320.4	292.2	269.6	251.1	235.6	222.6	211.4	201.7	193.3	185.8	179.1	173.2	167.8	163.0	158.6	154.6	150.9	147.5	144.4	141.5	138.8	136.3	133.9	2000
2100	1,133.5	778.4	600.7	494.2	423.2	372.4	334.4	304.8	281.1	261.7	245.6	231.9	220.2	210.1	201.2	193.3	186.4	180.2	174.5	169.5	164.9	160.6	157.8	153.2	149.9	146.9	144.1	141.5	139.0	2100
2200	1,183.7	812.5	626.8	515.4	441.1	388.1	348.3	317.4	292.5	272.4	255.6	241.2	229.0	218.4	209.1	200.9	193.6	187.1	181.2	175.9	171.1	166.7	162.7	159.0	155.5	152.3	149.4	146.7	144.1	2200
2300	1,233.9	846.5	652.8	536.6	459.1	403.8	362.3	330.0	304.2	283.0	265.4	250.5	237.7	226.7	217.0	208.4	200.8	194.1	187.9	182.4	177.4	172.8	168.6	164.7	161.1	157.8	154.7	151.9	149.2	2300
2400	1,284.1	880.6	678.8	557.8	477.1	419.4	376.2	342.6	315.7	293.7	275.3	259.8	246.5	235.0	224.9	216.0	208.1	201.0	194.6	188.9	183.6	178.9	174.5	170.4	166.7	163.2	160.0	157.1	154.3	2400
2500	1,334.3	914.7	704.9	579.0	495.1	435.1	390.2	355.2	327.8	304.3	285.2	269.1	255.3	243.3	232.8	223.6	215.3	208.0	201.3	195.3	189.9	184.9	180.4	176.2	172.3	168.7	165.4	162.3	159.4	2500
2600	1,384.5	948.8	730.9	600.2	513.0	450.8	404.1	367.8	338.7	315.0	295.2	278.4	264.1	251.6	240.7	231.1	222.6	214.9	208.0	201.8	196.2	191.0	186.3	181.9	177.9	174.1	170.7	167.5	164.5	2600
2700	1,434.6	982.9	756.9	621.4	531.0	466.5	418.1	380.4	350.3	325.6	305.1	287.7	272.8	259.9	248.6	238.7	229.8	221.9	214.7	208.3	202.4	197.1	192.2	187.8	183.5	179.6	176.0	172.7	169.5	2700
2800	1,484.8	1,017.0	782.9	642.6	549.0	482.1	432.0	393.0	361.8	336.3	315.0	297.0	281.6	268.2	256.5	246.2	237.0	228.8	221.4	214.8	208.7	203.1	198.0	193.4	189.0	185.0	181.3	177.9	174.8	2800
2900	1,535.0	1,051.0	809.0	663.8	567.0	497.8	445.9	405.6	373.3	347.0	324.9	306.3	290.4	276.5	264.4	253.8	244.3	235.8	228.1	221.2	214.9	209.2	203.9	199.1	194.6	190.5	186.6	183.1	179.7	2900
3000	1,585.2	1,085.1	835.0	685.0	584.9	513.5	459.9	418.2	384.9	357.6	334.8	315.6	299.1	284.9	272.3	261.3	251.5	242.6	234.8	227.7	221.2	215.3	209.8	204.8	200.2	195.9	192.0	188.3	184.8	3000
3100	1,635.4	1,119.2	861.0	706.2	602.9	529.2	473.8	430.8	396.4	368.3	344.8	324.9	307.9	293.2	280.3	268.9	258.7	249.7	241.5	234.2	227.5	221.3	215.7	210.6	205.8	201.4	197.3	193.5	189.9	3100
3200	1,685.6	1,153.3	887.1	727.4	620.9	544.8	487.8	443.4	407.9	378.9	354.7	334.2	316.7	301.5	288.2	276.4	266.0	256.7	248.2	240.6	233.7	227.4	221.6	216.3	211.4	206.8	202.6	198.7	195.0	3200
3300	1,735.8	1,187.4	913.1	748.6	638.9	560.5	501.7	456.0	419.5	389.6	364.6	343.5	325.5	309.8	296.1	284.0	273.2	263.6	254.9	247.1	240.0	233.5	227.5	222.0	217.0	212.3	207.9	203.9	200.1	3300
3400	1,786.0	1,221.5	939.1	769.8	656.8	576.2	515.7	468.6	431.0	400.2	374.5	352.8	334.2	318.1	304.0	291.5	280.5	270.6	261.6	253.6	246.2	239.6	233.4	227.8	222.6	217.7	213.2	209.1	205.2	3400
3500	1,836.2	1,255.6	965.1	791.0	674.8	591.9	529.6	481.3	442.5	410.9	384.5	362.1	343.0	326.4	311.9	299.1	287.7	277.5	268.3	260.0	252.5	245.6	239.3	233.5	228.1	223.2	218.5	214.3	210.3	3500
Term. 2/	79.570	62.630	54.160	49.080	45.690	43.270	41.455	40.045	38.915	37.990	37.22	36.570	36.010	35.525	35.105	34.730	34.395	34.100	33.830	33.590	33.370	33.170	32.985	32.815	32.660	32.515	32.380	32.255	32.140	Term. 2/
L. H. 3/	.50188	.34083	.26038	.21197	.17975	.15574	.13948	.12606	.11532	.10654	.09921	.09302	.08771	.08311	.07908	.07553	.07237	.06955	.06700	.06470	.06261	.06070	.05895	.05734	.05585	.05447	.05319	.05201	.05089	L. H. 3/

1/ Based on a tare weight of 22.8 tons and a ratio of empty car miles to loaded car miles of 0.335. The Less-carload cost study provides for several levels of cost. Cost Level II is that shown in this table. Compute the cost for other levels by multiplying the costs shown herein by the ratios shown below. The return is computed at both 4 percent and 5-3/4 percent.
For Cost Level III(a), Less-carload operating expenses, rents and taxes, plus a return at 4 percent upon the less-carload portion of the value, multiply by 1.21.
For Cost Level III(b), Less-carload operating expenses, rents and taxes, plus a return at 5-3/4 percent upon the less-carload portion of the value, multiply by 1.31.

Note: The above costs do not include an allowance for loss and damage. See Table 85 herein for loss and damage payments per 100 pounds on less-carload traffic. Payments to be added to cost scales after latter have been increased by ratios shown.

See Text, Chapter I, for a discussion of the economic significance of each of the above levels of cost.

2/ Terminal expenses per 100 pounds. Includes those expenses which are independent of the length of haul.

3/ Line-haul expenses per 100 pounds per mile. Includes those expenses which are variable with the length of haul. The factors shown for terminal and line-haul expenses were those used in compiling the cost scale.

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Table 85.—Statement of Loss and Damage Payments by Commodity Groups for 1939 1/

Line No.	Commodity groups (1)	I.C.C. commodity class numbers (2)	Total loss and damage payments (3)	Amount of traffic (hundredweight) (4)	Loss and damage per 100 lbs. (5)	Line No.
					(Cents)	
1	Grain	10, 20, 30, 40, 41, 42, 162	$490,598	866,627,260	0.057	1
2	Flour and other mill products	50, 51, 52, 60, 61	395,600	388,025,700	.102	2
3	Cotton	90, 91	45,994	67,337,420	.068	3
4	Fresh fruits (except citrus)	120, 121, 122, 124, 125, 127, 128	1,057,722	63,790,980	1.658	4
5	Fresh fruits, citrus	110, 111	437,819	56,081,480	.781	5
6	Melons	123, 126	552,884	8,955,240	6.174	6
7	Vegetables, fresh	130, 140, 141, 142, 143, 152	1,938,955	124,461,060	1.558	7
8	All other products of agriculture	70,71,80,100,101,150,151,160,161,163,164	142,776	363,140,840	.039	8
9	Livestock	170, 180, 181, 190, 191, 200, 201, 230	1,112,054	143,488,120	.775	9
10	Fresh and cured meats, packing-house products, dressed poultry	210, 220, 222, 231	236,880	86,748,280	.273	10
11	Butter, butter substitutes and cheese	221, 250, 251	48,792	16,504,340	.296	11
12	Eggs in shell	240	136,280	6,869,520	1.984	12
13	All other animals & animal products except fertilizer & fert. material	260, 270, 271, 280, 281, 282	52,216	55,927,020	.093	13
14	Coal and coke	290, 300, 310	556,100	6,618,941,480	.008	14
15	All other products of mines	320, 330, 331, 332, 333, 350, 351, 352, 353, 360, 370, 380, 390, 391, 392	229,884	3,319,838,160	.007	15
16	Lumber and forest products	400, 401, 402, 410, 420, 430, 431, 432, 440, 441, 442, 443	204,268	1,063,008,860	.019	16
17	Petroleum oils	450, 451, 452, 453	70,518	999,545,360	.007	17
18	Vegetable oils	460, 461, 462	66,455	35,717,900	.186	18
19	Sugar	470	269,150	97,726,560	.275	19
20	Iron, steel and other metal articles, n.e.s. incl. wire	490, 491, 500, 510, 511, 512, 513, 520, 521, 522, 523, 583, 693	218,966	1,106,000,900	.020	20
21	Machinery (other than agricultural) and boilers	530	277,812	32,892,820	.845	21
22	Brick, artificial stone and building tile	550, 551, 552	282,296	127,440,980	.222	22
23	Sewer pipe and drain tile (not metal)	570	469,172	17,282,860	2.715	23
24	Agricultural implements and parts, vehicles, horse drawn and parts	580, 581	60,140	12,740,020	.472	24
25	Automobiles, autotrucks, tractors, tires, parts, etc.	582, 590, 591, 592, 593	369,100	131,292,680	.280	25
26	Furniture, new	610, 611	483,150	13,422,580	3.600	26
27	Paper (newsprint)	650, 651	181,252	90,688,460	.200	27
28	Canned food products (in tin or glass)	680	349,621	93,979,040	.372	28
29	Tobacco, manufactured products	690	38,118	5,420,980	.703	29
30	Glass, flat other than plate, bottles, jars and jelly glasses	699, 700	68,096	47,021,800	.145	30
31	Ale, wine, beer, alcoholic liquors and mineral water	620	297,473	50,915,240	.584	31
32	Unassigned	471,472,540,560,561,630,640,660,661,662, 670,671,691,692,694,695,696,697,698,701	2,874,889	1,906,465,620	.151	32
33	Total, carload	850	14,015,030	18,018,299,560	.078	33
34	Total, l.c.l.	710	4,507,463	297,498,980	1.515	34
35	Grand total, carload and l.c.l.	860	18,522,493	18,315,798,540	.101	35

1/ The amounts shown in this table include only the loss and damage payments as reported by the carriers in answer to a questionnaire dated November 19, 1940. The remaining charges to Account 418 have been treated as an overhead and are included in the figures shown in the cost scales. Reference appears in footnote 1 of each table of the cost scales directing the reader to Table 85 for loss and damage payments per 100 pounds by commodity groups and by territories. Subsequent to the completion of the cost scales the conclusion was reached that the loss and damage payments by territories based upon the traffic originated, and received from connections, would not be meaningful for the purpose intended. For this reason the loss and damage payments per hundred pounds by commodity groups are shown only for the United States as a whole. The costs per hundredweight were obtained by dividing the payments shown in column (3) by the hundredweight originated or terminated, whichever was the greater. (See column (4)). The amount of traffic by commodity groups was obtained from Freight Commodity Statistics, Statement 40100 (1939). The difference reported between the traffic originated and terminated by Class I carriers is occasioned by the interchange of such traffic with Class II and Class III carriers, Canadian and Mexican railroads, and switching and terminal companies. The larger figure more closely represents the volume of traffic handled. The loss and damage payments shown necessarily represent the amount applicable to the average length haul obtaining in the United States on the respective commodity groups.

Table 86.—Statement of Territorial Average Tare Weights and Ratios of Empty to Loaded Car Miles by Classes of Equipment for 1939 1/

Terr. No.	Territory	Average tare weight in tons by classes of equipment						Ratio of empty to loaded car-miles by classes of equipment						Terr. No.
	(1)	Box (2)	Flat (3)	Gondola and hopper (4)	Tank 2/ (5)	Stock (6)	Refrigerator 2/ (7)	Box (8)	Flat (9)	Gondola and hopper (10)	Tank (11)	Stock (12)	Refrigerator (13)	
1	New England	21.1	19.5	21.1	22.1	20.4	27.5	0.284	0.827	0.880	0.993	0.981	0.862	1
2	Eastern, excluding New England and Northern Illinois	23.3	20.6	22.1	24.1	20.9	27.5	.350	.839	.843	.982	1.006	.869	2
3	Eastern, excluding New England but including Northern Illinois	23.3	20.6	22.1	24.1	20.9	27.5	.350	.839	.843	.982	1.006	.869	3
4	Total Eastern, including New England and Northern Illinois	23.0	20.5	22.0	23.9	20.9	27.5	.340	.838	.845	.983	1.005	.867	4
5	Pocahontas	24.0	19.4	22.1	3/	20.8	28.5	.330	.568	.928	.999	1.500	.696	5
6	Southern	22.4	19.0	21.2	21.3	20.5	27.3	.294	.789	.918	.960	.897	.848	6
7	Southwestern, including Southern Missouri	22.9	18.5	21.9	21.9	21.0	25.9	.378	.676	.802	.955	.832	.658	7
8	Western Trunk Line, excluding Northern Illinois and Southern Missouri	22.0	19.1	21.0	23.2	20.1	27.5	.341	.703	.830	.990	.906	.698	8
9	Western Trunk Line, including Northern Illinois but excluding Southern Missouri	22.0	19.1	21.0	23.2	20.1	27.5	.341	.703	.830	.990	.906	.698	9
10	Mountain Pacific	22.7	16.1	23.3	23.5	19.6	27.7	.333	.760	.789	1.000	.879	.734	10
11	Total Western, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri	22.5	17.4	21.7	22.7	20.1	27.2	.351	.723	.812	.977	.880	.695	11
12	Total United States	22.8	18.1	21.9	22.8	20.4	27.3	.335	.748	.857	.977	.919	.795	12

1/ Tare weights are based on a weighted average of the tare weights for railroad owned equipment as reported by the carriers in reply to a questionnaire issued under date of November 19, 1940. Territorial averages obtained by weighting the weight reported by each carrier for each class of equipment by the number of carloads forwarded in such class of equipment by each carrier.
Ratios of empty to loaded car-miles are based on the data furnished by carriers in response to questionnaire under date of November 19, 1940. Territorial averages obtained by weighting the ratio of the empty to loaded car-miles reported by each carrier for each class of equipment by the number of carloads forwarded in such class of equipment by each carrier.

2/ Figures based on railroad owned equipment. United States average tare weights used for all territories in compiling cost scales.

3/ No information provided.

Table No. 87.—Territorial Summary of Aggregate Costs, Aggregate Units, Unit Costs, and the Computation of the Territorial Allowances for Less-carload Deficit, Passenger Deficit, and Return on the Value of the Property

Territory No.	Territory	Group I: Carload and less-carload freight-train car expenses - running, other than mileage cars			Group II: Carload and less-carload other running expenses common to all cars, mileage and other			Total cost per car-mile other than mileage cars (col.(3) + col.(6)) 1/	Group III: Carload and less-carload remaining running expenses treated on a gross ton-mile basis			Group IV: Carload switching expenses, origin or destination only, treated on per loaded car basis			Group IV: Less-carload switching expenses, origin or destination only, treated on per loaded car basis			Territory No.
		Expenses (1)	Revenue car-miles, other than mileage cars - loaded and empty (2)	Cost per revenue car-mile - loaded and empty (col.(1) + col.(2)) (3) (cents)	Expenses (4)	Total revenue car-miles including mileage cars, loaded and empty (5)	Cost per revenue car-mile - loaded and empty (col.(4) + col.(5)) (6) (cents)	(7) (cents)	Expenses (8)	Revenue gross ton-miles - cars and contents excluding caboose (9)	Cost per revenue gross ton-mile (col.(8) + col.(9)) (10) (cents)	Expenses (11)	Cars switched, loads (12)	Cost per loaded car (col.(11) + col.(12)) (13)	Expenses (14)	Cars switched, loads (15)	Cost per loaded car (col.(14) + col.(15)) (16)	
1	New England	$7,073,859	429,137,839	1.648	$9,055,808	556,394,936	1.628	3.276	$44,276,137	20,543,832,439	0.216	$10,343,008	1,842,281	$5.940	$1,962,426	449,074	$4.370	1
2	Eastern, excluding New England and Northern Illinois	101,562,081	5,948,142,884	1.707	137,970,365	7,505,535,172	1.838	3.545	441,945,319	307,544,631,518	.144	133,653,751	20,888,549	6.398	9,311,977	1,988,623	4.683	2
3	Eastern, excluding New England but including Northern Illinois	107,699,826	6,386,011,603	1.686	148,497,568	8,149,315,933	1.822	3.508	476,815,364	333,599,924,157	.143	147,553,599	22,802,923	6.471	11,156,974	2,341,624	4.765	3
4	Total Eastern, including New England and Northern Illinois	114,773,685	6,815,149,442	1.684	157,553,376	8,705,710,869	1.810	3.494	521,091,501	354,143,756,596	.147	158,496,607	24,645,204	6.431	13,119,400	2,790,698	4.701	4
5	Pocahontas	20,238,646	1,254,251,790	1.614	13,755,755	1,349,552,033	1.019	2.633	71,754,029	64,970,253,775	.110	17,466,430	2,871,857	6.082	780,439	176,346	4.426	5
6	Southern	25,935,027	1,925,171,447	1.347	27,439,106	2,449,685,530	1.120	2.467	151,947,454	94,035,948,836	.162	29,154,061	5,666,975	5.145	4,248,861	1,147,123	3.704	6
7	Southwestern, including Southern Missouri	17,713,524	1,207,138,800	1.467	20,043,143	1,834,876,398	1.058	2.525	116,172,934	72,875,898,151	.159	18,828,759	3,678,132	5.119	2,022,865	545,723	3.707	7
8	Western Trunk Line, excluding Northern Illinois and Southern Missouri	31,028,361	2,209,568,404	1.404	35,327,591	3,176,794,871	1.112	2.516	195,411,645	121,778,488,444	.160	39,595,292	6,642,553	5.961	4,835,293	1,115,397	4.335	8
9	Western Trunk Line, including Northern Illinois but excluding Southern Missouri	37,166,106	2,647,437,123	1.404	45,854,794	3,820,575,632	1.200	2.604	230,281,690	147,833,781,083	.156	53,495,140	8,556,927	6.252	6,680,290	1,468,398	4.549	9
10	Mountain Pacific	25,060,985	1,863,033,431	1.345	25,664,900	2,801,356,542	.916	2.261	176,313,762	109,871,068,282	.160	27,374,589	4,548,717	6.018	2,710,055	616,432	4.396	10
11	Total Western, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois, and Southern Missouri	79,940,615	5,717,609,354	1.398	91,562,837	8,516,808,572	1.075	2.473	522,768,386	330,580,747,516	.158	99,698,488	16,783,776	5.940	11,413,210	2,630,553	4.339	11
12	Total United States	234,750,228	15,274,313,314	1.537	279,783,671	20,377,976,243	1.373	2.910	1,232,691,325	817,675,414,084	.151	290,915,738	48,053,436	6.054	27,716,913	6,398,719	4.336	12
	Northern Illinois	6,137,745	437,868,719	1.402	10,527,203	643,780,761	1.635	3.037	34,870,045	26,055,292,639	.134	13,899,848	1,914,374	7.261	1,844,997	353,001	5.227	
	Southern Missouri	944,574	73,057,534	1.293	1,542,282	117,023,714	1.318	2.611	6,178,291	4,519,169,200	.137	953,636	130,883	7.288	88,829	19,122	4.645	

1/ Freight train-car maintenance and rentals, other than mileage cars, in switching service, plus detention for loading and unloading at origin or destination only, expenses treated on loaded car basis.

Table No. 87.—(Continued) Territorial Summary of Aggregate Costs, Aggregate Units, Unit Costs, and the Computation of the Territorial Allowances for Less-carload Deficit, Passenger Deficit, and Return on the Value of the Property

Territory No.	Territory	Group V Less-carload switching expenses, account transfer, treated on loaded car-mile basis			Group VI Carload freight-train car maintenance and rentals other than mileage, origin or destination 1/			Group VI Less-carload freight-train car maintenance and rentals other than mileage, origin or destination 1/			Group VII Less-carload freight-train car maintenance and rentals, switching service, account transfer only 2/			Group VIII Carload station expenses, clerical origin or destination			Territory No.
		Expenses (17)	Less-carload loaded car-miles (18)	Total cost stated in terms of loaded car-miles (col. (17) + (18)) (19) (cents)	Expenses (20)	Loaded cars (21)	Cost per loaded car (col. (20) + col. (21)) (22)	Expenses (23)	Loaded cars (24)	Cost per loaded car (col. (23) + col. (24)) (25)	Expenses (26)	Loaded car-miles (27)	Total cost stated in terms of loaded car-miles (col. (26) + (27)) (28) (cents)	Expenses (29)	Consignments (30)	Cost per consignment (col. (29) + col. (30)) (31)	
1	New England	$1,147,389	73,666,205	1.558	$3,128,672	1,478,142	$2.117	$480,215	449,074	$1.069	$298,634	73,666,205	0.405	$3,445,522	1,842,281	$1.870	1
2	Eastern, excluding New England and Northern Illinois	6,325,038	507,343,760	1.247	28,881,770	18,761,649	1.538	1,624,748	1,988,623	.817	1,079,084	507,343,760	.213	33,949,780	20,888,549	1.625	2
3	Eastern, excluding New England but including Northern Illinois	7,280,993	591,205,493	1.232	31,144,984	20,336,445	1.531	1,899,532	2,341,624	.811	1,220,598	591,205,493	.206	37,853,021	22,802,923	1.660	3
4	Total Eastern, including New England and Northern Illinois	8,428,382	664,871,698	1.268	34,273,656	21,814,587	1.571	2,379,747	2,790,698	.853	1,519,232	664,871,698	.229	41,298,543	24,645,204	1.676	4
5	Pocahontas	571,192	58,209,144	.981	2,114,520	2,776,818	.761	62,353	176,346	.354	38,425	58,209,144	.066	3,646,530	2,871,857	1.270	5
6	Southern	2,165,651	269,224,845	.804	5,078,844	4,850,360	1.047	670,805	1,147,123	.585	302,138	269,224,845	.112	10,499,178	5,666,975	1.853	6
7	Southwestern, including Southern Missouri	940,671	120,806,821	.779	4,071,492	2,784,990	1.462	408,040	545,723	.748	189,706	120,806,821	.157	8,981,529	3,678,132	2.442	7
8	Western Trunk Line, excluding Northern Illinois and Southern Missouri	2,378,413	262,693,674	.905	8,036,654	5,585,292	1.439	810,445	1,115,397	.727	403,988	262,693,674	.154	13,636,023	6,642,553	2.053	8
9	Western Trunk Line, including Northern Illinois but excluding Southern Missouri	3,334,368	346,555,407	.962	10,299,868	7,140,088	1.443	1,085,229	1,468,398	.739	545,502	346,555,407	.157	17,539,264	8,556,927	2.050	9
10	Mountain Pacific	1,042,180	160,283,082	.650	4,967,632	3,660,811	1.357	438,796	616,432	.712	181,703	160,283,082	.113	10,418,841	4,548,717	2.291	10
11	Total Western, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri	5,717,219	627,645,310	.847	19,338,992	13,585,889	1.423	1,932,065	2,630,553	.734	916,911	627,645,310	.146	36,939,634	16,783,776	2.201	11
12	Total United States	15,526,489	1,536,089,264	1.011	58,542,798	41,472,858	1.412	4,770,186	6,391,719	.746	2,635,192	1,536,089,264	.172	88,480,644	48,053,438	1.841	12
	Northern Illinois	955,955	83,861,733	1.140	2,263,214	1,554,796	1.456	274,784	353,001	.778	141,514	83,861,733	.169	3,903,241	1,914,374	2.039	
	Southern Missouri	58,405	5,963,519	.979	149,278	97,389	1.533	16,105	19,122	.842	10,754	5,963,519	.180	483,014	130,883	3.690	

1/ Freight train-car maintenance and rentals, other than mileage cars, in switching service, plus detention for loading and unloading at origin or destination only, expenses treated on loaded car basis.
2/ Less-carload freight train-car maintenance and rentals, other than mileage cars, in switching service, plus detention for loading and unloading, account transfer only, expenses treated on loaded car-mile basis.

Table No. 87.—(Continued) Territorial Summary of Aggregate Costs, Aggregate Units, Unit Costs, and the Computation of the Territorial Allowances for Less-carload Deficit, Passenger Deficit, and Return on the Value of the Property

Territory No.	Territory	Group VIII - Continued Less-carload station expenses, clerical, origin or destination			Group IX Less-carload platform costs, origin or destination			Group X Less-carload platforms handling account transfer			Total freight operating expenses, rents and taxes, excluding passenger portion of nonrevenue freight expenses, loss and damage payments, miscellaneous operations and car hire for cars rented on a mileage basis 1/	Territory No.
		Expenses	Less-carload tons	Cost per less-carload ton (col. (32) ÷ col. (33))	Expenses	Less-carload tons, origin plus destination	Cost per ton, origin or destination (col. (35) ÷ col. (36))	Expenses	Less-carload net ton-miles	Cost per net ton-mile (col. (38) ÷ col. (39))		
		(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40) (cents)	(41)	
1	New England	$3,749,992	2,489,357	$1.506	$2,388,147	2,489,357	$0.959	$1,436,465	382,364,341	0.3757	$89,386,274	1
2	Eastern, excluding New England and Northern Illinois	17,994,592	11,470,131	1.569	11,637,953	11,470,131	1.015	7,568,443	3,298,741,507	.2294	933,504,901	2
3	Eastern, exmluding New England but including Northern Illinois	20,840,426	12,795,462	1.629	13,851,021	12,795,462	1.082	8,705,594	3,699,027,235	.2353	1,014,519,500	3
4	Total Eastern, including New England and Northern Illinois	24,590,418	15,284,819	1.609	16,239,168	15,284,819	1.062	10,142,059	4,081,391,576	.2485	1,103,905,774	4
5	Pocahontas	1,082,017	844,301	1.282	1,102,505	844,301	1.306	833,990	331,539,406	.2516	133,446,831	5
6	Southern	6,929,709	4,997,469	1.387	5,056,399	4,997,469	1.012	2,663,787	1,427,583,060	.1866	272,091,020	6
7	Southwestern, including Southern Missouri	4,924,142	2,026,707	2.430	1,867,212	2,026,707	.921	872,771	563,457,144	.1549	197,036,788	7
8	Western Trunk Line, exmluding Northern Illinois and Southern Missouri	9,461,527	4,003,178	2.363	5,021,260	4,003,178	1.254	2,391,422	1,073,401,742	.2228	348,337,914	8
9	Western Trunk Line, including Northern Illinois but excluding Southern Missouri	12,307,361	5,328,509	2.310	7,234,328	5,328,509	1.358	3,528,573	1,473,687,470	.2394	429,352,513	9
10	Mountain Pacific	5,120,269	2,365,221	2.165	3,487,889	2,365,221	1.475	1,206,955	663,013,356	.1820	283,988,556	10
11	Total Western, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri	22,351,772	9,720,437	2.299	12,589,429	9,720,437	1.295	5,608,299	2,700,157,970	.2077	910,377,857	11
12	Total United States	52,108,082	29,521,695	1.765	32,774,433	29,521,695	1.110	18,110,984	8,140,386,284	.2225	2,338,806,883	12
	Northern Illinois	2,845,834	1,325,331	2.147	2,213,068	1,325,331	1.670	1,137,151	400,285,728	.2841	81,014,599	
	Southern Missouri	248,740	67,005	3.712	66,276	67,005	.989	43,928	25,932,454	.1694	10,784,314	

1/ Sum of columns (1), (4), (8), (11), (14), (17), (20), (23), (26), (29), (32), (35) and (38).

Table No. 87.—(Continued) Territorial Summary of Aggregate Costs, Aggregate Units, Unit Costs, and the Computation of the Territorial Allowances for Less-carload Deficit, Passenger Deficit, and Return on the Value of the Property

Territory No.	Territory	Carload oper. exps., rents and taxes incl. car hire for cars rented on a mileage basis	Less-carload deficits				Passenger deficits				Cost of providing 5-3/4% return on less-carload value			Less-carload deficits after return at 4%		Passenger deficits after return at 4%		Cost of providing 4% return on less-carload value		Territory No.
			Less-carload operating deficit (after oper. exps., rents, taxes and P.U.&D.)	Ratio of less-carload deficit to carload oper. exps., rents and taxes (col. (43) ÷ col. (42))	Total less-carload deficit (after ret. at 5-3/4%)	Ratio of less-carload deficit (after ret. at 5-3/4%) to carload oper. exps., rents and taxes (col. (45) ÷ col. (42))	Passenger operating deficit	Ratio of pass. oper. deficit to carload oper. exps., rents and taxes (col. (47) ÷ col. (42))	Total pass. deficit (after ret. of 5-3/4%)	Ratio of passenger deficit (after ret. of 5-3/4%) to carload oper. exps., rents and taxes (col. (49) ÷ col. (42))	Less-carload oper. exps., rents and taxes (excl. L.&D. and P.U. & D.)	Cost of providing 5-3/4% ret. on less-carload portion of value	Ratio of less-carload 5-3/4% return to less-carload oper. exps. rents and taxes (excl. L.&D. and P.U.&D.) (col. (52) ÷ col. (51))	Total less-carload deficit (after ret. at 4%)	Ratio of less-carload deficit (after ret. at 4%) to carload oper. exps., rents and taxes (col. (54) ÷ col. (42))	Total pass. deficit (after ret. of 4%)	Ratio of passenger deficit (after ret. of 4%) to carload oper. exps., rents and taxes (col. (56) ÷ col. (42))	Cost of providing 4% return on less-carload portion of value	Ratio of less-carload 4% return to less-carload oper. exps., rents and taxes (excl.L&D. and P.U.&D.) (col. (58) ÷ col. (51))	
		(42)	(43)	(44) (percent)	(45)	(46) (percent)	(47)	(48) (percent)	(49)	(50) (percent)	(51)	(52)	(53) (percent)	(54)	(55) (percent)	(56)	(57) (percent)	(58)	(59) (percent)	
1	New England	$72,544,623	$1,685,609	2.60	$8,025,103	11.06	$10,617,390	14.64	$31,140,958	42.93	$19,868,019	$6,139,494	30.90	$6,156,561	8.49	$24,894,655	34.32	$4,270,951	21.50	1
2	Eastern, excluding New England and Northern Illinois	862,485,916	27,401,144	3.18	59,021,307	6.84	88,056,687	10.21	198,208,743	22.98	105,836,617	31,620,162	29.88	49,397,779	5.73	164,684,204	19.09	21,996,635	20.78	2
3	Eastern, excluding New England but including Northern Illinois	932,550,332	30,683,537	3.29	67,955,708	7.29	101,015,372	10.83	224,841,696	24.11	121,059,960	37,272,170	30.79	56,612,004	6.07	187,155,422	20.07	25,928,467	21.42	3
4	Total Eastern, including New England and Northern Illinois	1,005,094,955	32,569,146	3.24	75,980,811	7.56	111,632,762	11.11	255,982,654	25.47	140,927,979	43,411,664	30.80	62,768,565	6.25	212,050,077	21.10	30,199,416	21.43	4
5	Pocahontas	126,889,686	800,543	.63	3,488,784	2.75	11,000,177	8.67	17,143,683	13.51	8,909,970	2,688,241	30.17	2,670,623	2.10	15,273,920	12.04	1,870,080	20.99	5
6	Southern	237,584,633	2,871,262	1.21	16,619,492	7.00	35,290,275	14.85	65,778,567	27.69	45,857,075	13,748,231	29.98	12,435,249	5.23	56,499,489	23.78	9,563,987	20.86	6
7	Southwestern, including Southern Missouri	189,520,279	7,080,709	3.74	13,471,710	7.11	31,087,704	16.40	48,980,061	25.84	22,118,158	6,391,001	28.89	11,526,622	6.08	43,534,560	22.97	4,445,913	20.10	7
8	Western Trunk Line, excluding Northern Illinois and Southern Missouri	318,316,741	16,659,616	5.22	32,258,094	10.11	56,716,031	17.78	97,848,345	30.68	48,879,522	15,598,478	31.91	27,510,732	8.63	85,329,814	26.76	10,851,117	22.20	8
9	Western Trunk Line, including Northern Illinois but excluding Southern Missouri	388,961,157	19,942,009	5.13	41,192,495	10.59	69,674,716	17.91	124,481,298	32.00	64,102,865	21,250,486	33.15	34,724,957	8.93	107,801,032	27.71	14,782,949	23.06	9
10	Mountain Pacific	275,469,827	8,258,360	3.00	17,130,018	6.22	45,501,256	16.52	86,781,488	31.50	28,216,497	8,871,657	31.44	14,429,948	5.24	74,217,937	26.94	6,171,590	21.87	10
11	Total Western, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri	853,971,263	35,281,078	4.13	71,794,223	8.41	146,263,676	17.13	260,242,847	30.47	114,437,520	36,513,144	31.91	60,681,527	7.11	225,553,529	26.41	25,400,452	22.20	11
12	Total United States	2,153,476,121	68,239,636	3.17	158,948,909	7.38	291,228,105	13.52	572,514,798	26.59	294,909,201	90,709,272	30.76	131,341,739	6.10	486,905,797	22.61	63,102,105	21.40	12
	Northern Illinois	70,064,416	3,282,393	4.68	8,934,401	12.75	12,958,685	18.50	26,632,953	38.01	15,223,343	5,652,008	37.13	7,214,225	10.30	22,471,218	32.07	3,931,832	25.83	
	Southern Missouri	10,756,324	210,094	1.95	497,839	4.63	1,823,351	16.95	2,525,545	23.48	1,014,191	287,745	28.37	410,265	3.81	2,311,834	21.49	200,171	19.74	

Table No. 87.—(Concluded) Territorial Summary of Aggregate Costs, Aggregate Units, Unit Costs, and the Computation of the Territorial Allowances for Less-carload Deficit, Passenger Deficit, and Return on the Value of the Property

Territory No.	Territory	Carload operating expenses, rents & taxes (60)	Cost of providing 5-3/4% return on carload portion of value: Amount (61)	Ratio of carload 5-3/4% ret. to carload oper. exps., rents and taxes (col. (61) + col. (60)) (62) (percent)	Cost of providing 5-3/4% return on total freight value carload and less-carload: Amount (63)	Ratio of total frt. 5-3/4% ret., carload and less-carload, to carload oper. exps., rents and taxes (col. (63) + col. (60)) (64) (percent)	Cost of providing 5-3/4% return on total value freight and passenger: Amount (65)	Ratio of total 5-3/4% ret., frt. and pass., to carload oper. exps., rents & taxes (col. (65) + col. (60)) (66) (percent)	Cost of providing 4% return on carload portion of value: Amount (67)	Ratio of carload 4% ret. to carload oper. exps., rents and taxes (col. (67) + col. (60)) (68) (percent)	Cost of providing 4% return on total freight value carload and less-carload: Amount (69)	Ratio of tot. frt. 4% ret., carload & less-carload to carload oper. exps., rents and taxes (col. (69) + col. (60)) (70) (percent)	Cost of providing 4% return on total value, freight and passengers: Amount (71)	Ratio of tot. 4% ret., frt. & pass., to carload oper. exps., rents and taxes (col. (71) + col. (60)) (72) (percent)	Cost of providing current rate of return: Current return all services, 1939 (73)	Recommended value of property as of Dec. 31, 1939 (74)	Current rate of return, all services (col. (73) + col. (74)) (75) (percent)
1	New England	$72,544,623	$23,281,578	32.09	$29,421,072	40.56	$49,944,637	68.85	$16,195,880	22.33	$20,466,831	28.21	$34,744,096	47.89	$21,685,403	$874,237,243	2.48
2	Eastern, excluding New England and Northern Illinois	862,485,916	259,115,506	30.04	290,735,668	33.71	400,887,720	46.48	180,254,263	20.90	202,250,898	23.45	278,878,415	32.33	236,139,415	7,022,164,519	3.36
3	Eastern, excluding New England but including Northern Illinois	932,550,332	282,537,030	30.30	319,809,200	34.29	443,635,518	47.57	196,547,497	21.08	222,475,964	23.86	308,616,012	33.09	250,419,432	7,776,466,586	3.22
4	Total Eastern, including New England and Northern Illinois	1,005,094,955	305,818,608	30.43	349,230,272	34.75	493,580,155	49.11	212,743,377	21.17	242,942,795	24.17	343,360,108	34.16	272,104,835	8,650,703,829	3.15
5	Pocahontas	126,889,686	38,853,916	30.62	41,542,157	32.74	47,685,663	37.58	27,028,812	21.30	28,898,892	22.77	33,172,635	26.14	77,041,865	829,700,000	9.29
6	Southern	237,584,633	71,590,603	30.13	85,338,835	35.92	115,827,227	48.75	49,802,160	20.96	59,366,147	24.99	80,575,462	33.91	70,610,320	2,019,647,648	3.50
7	Southwestern, including Southern Missouri	189,520,279	54,635,510	28.83	61,026,512	32.20	78,918,870	41.64	38,007,312	20.05	42,453,225	22.40	54,900,082	28.97	33,904,653	1,380,512,309	2.46
8	Western Trunk Line, excluding Northern Illinois and Southern Missouri	318,916,741	100,354,447	31.47	115,952,923	36.36	157,085,241	49.26	69,811,785	21.89	80,662,902	25.29	109,276,688	34.26	66,846,688	2,763,191,849	2.42
9	Western Trunk Line, including Northern Illinois but excluding Southern Missouri	388,981,157	123,775,971	31.82	145,026,455	37.28	199,833,039	51.37	86,105,019	22.14	100,887,968	25.94	139,014,285	35.74	81,126,705	3,517,493,916	2.31
10	Mountain Pacific	275,469,827	91,501,087	33.22	100,372,744	36.44	141,652,975	51.42	63,692,930	23.11	69,824,520	25.35	98,541,200	35.77	68,320,722	2,522,269,504	2.71
11	Total Western, including Southwestern, Western Trunk Line, Mountain Pacific, Northern Illinois and Southern Missouri	853,971,263	269,912,568	31.61	306,425,711	35.88	420,404,884	49.23	187,765,261	21.99	213,165,713	24.96	292,455,567	34.25	183,352,080	7,420,275,729	2.47
12	Total United States	2,153,476,121	662,754,171	30.78	753,463,443	34.99	1,034,750,131	48.05	461,046,376	21.41	524,148,483	24.34	719,826,175	33.43	588,829,083	18,166,025,139	3.24
	Northern Illinois	70,064,416	23,421,524	33.43	29,073,532	41.50	42,747,798	61.01	16,293,234	23.25	20,225,066	28.87	29,737,597	42.44	14,280,017	754,302,067	1.89
	Southern Missouri	10,758,324	3,116,794	28.98	3,404,539	31.65	4,106,733	38.18	2,168,204	20.16	2,368,37	22.02	2,856,858	26.56	2,242,084	72,070,117	3.11

Table 88.--Statement Showing the Procedure Used in the Assembly of Carload Unit Costs for the Purpose of Computing the Carload Cost Scales 1/

For Purposes of Illustration the Costs Shown Are Based on a Movement in Box Cars
The Expenses Are Those Compiled for the United States, Territory No. 17

Procedure Used in the Assembly of Carload Unit Costs

Line No.	Net load per car tons (1)	Expenses independent of distance (origin plus destination): Group IV - C.L. industry and team track switching expenses per loaded car 2/ (2)	Group VI - C.L. Carload freight train car maint. and rentals, switching serv. origin + dest. only, expense per loaded car 3/ (3)	Group VIII - C.L. Station clerical exp. as per carload 4/ (4)	Total C. L. switching expenses, freight train car expenses (terminal) and station expe., per loaded car (Cols. (2), (3), and (4)) (5)	Number of cwt. per net load per car (Col. (1) x 20 cwt.) (6)	Switching freight train car maint., and station expenses per cwt. (Col. (5) ÷ col. (6)) (7) (Cents)	Expenses treated as proportional to the length of haul: Group I - C. L. freight train car expenses - running, other than mileage cars, per loaded car-mile 5/ (8) (Cents)	Group II - C.L. Running expe. common to all cars, incl. interchange and intertrain switching per loaded car-mile 6/ (9) (Cents)	Gross tons of car & contents, incl. empty return (Col. (1) + footnote 1, line (d)) (10)	Group III - C.L. Remaining running expenses treated on GTM basis and converted to a cost per loaded car-mile (Col. (10) x .151 cents per GTM) 7/ (11) (Cents)	Total running expe. stated in terms of loaded car-mile incl. empty ret. (Cols. (8), (9), and (11)) (12) (Cents)	Running expe. per 100 pounds of net load per mile (Col. (12) ÷ col. (6)) (13) (Cents)	Line No.
1	5	$12.108	$2.824	$3.682	$18.614	100	18.614	2.052	1.833	35.438	5.351	9.236	0.092360	1
2	6	12.108	2.824	3.682	18.614	120	15.512	2.052	1.833	36.438	5.502	9.387	.078225	2
3	7	12.108	2.824	3.682	18.614	140	13.296	2.052	1.833	37.438	5.653	9.538	.068129	3
4	8	12.108	2.824	3.682	18.614	160	11.634	2.052	1.833	38.438	5.804	9.689	.060556	4
5	9	12.108	2.824	3.682	18.614	180	10.341	2.052	1.833	39.438	5.955	9.840	.054667	5
6	10	12.108	2.824	3.682	18.614	200	9.307	2.052	1.833	40.438	6.106	9.991	.049955	6
7	11	12.108	2.824	3.682	18.614	220	8.461	2.052	1.833	41.438	6.257	10.142	.046100	7
8	12	12.108	2.824	3.682	18.614	240	7.756	2.052	1.833	42.438	6.408	10.293	.042888	8
9	13	12.108	2.824	3.682	18.614	260	7.159	2.052	1.833	43.438	6.559	10.444	.040169	9
10	14	12.108	2.824	3.682	18.614	280	6.648	2.052	1.833	44.438	6.710	10.995	.037839	10
11	15	12.108	2.824	3.682	18.614	300	6.205	2.052	1.833	45.438	6.861	10.746	.035820	11
12	16	12.108	2.824	3.682	18.614	320	5.817	2.052	1.833	46.438	7.012	10.897	.034053	12
13	17	12.108	2.824	3.682	18.614	340	5.475	2.052	1.833	47.438	7.163	11.048	.032494	13
14	18	12.108	2.824	3.682	18.614	360	5.171	2.052	1.833	48.438	7.314	11.199	.031108	14
15	19	12.108	2.824	3.682	18.614	380	4.898	2.052	1.833	49.438	7.465	11.350	.029868	15
16	20	12.108	2.824	3.682	18.614	400	4.654	2.052	1.833	50.438	7.616	11.501	.028753	16
17	21	12.108	2.824	3.682	18.614	420	4.432	2.052	1.833	51.438	7.767	11.652	.027743	17
18	22	12.108	2.824	3.682	18.614	440	4.230	2.052	1.833	52.438	7.918	11.803	.026825	18
19	23	12.108	2.824	3.682	18.614	460	4.047	2.052	1.833	53.438	8.069	11.954	.025987	19
20	24	12.108	2.824	3.682	18.614	480	3.878	2.052	1.833	54.438	8.220	12.105	.025219	20
21	25	12.108	2.824	3.682	18.614	500	3.723	2.052	1.833	55.438	8.371	12.256	.024512	21
22	26	12.108	2.824	3.682	18.614	520	3.580	2.052	1.833	56.438	8.522	12.407	.023860	22
23	27	12.108	2.824	3.682	18.614	540	3.447	2.052	1.833	57.438	8.673	12.558	.023256	23
24	28	12.108	2.824	3.682	18.614	560	3.324	2.052	1.833	58.438	8.824	12.709	.022695	24
25	29	12.108	2.824	3.682	18.614	580	3.209	2.052	1.833	59.438	8.975	12.860	.022172	25
26	30	12.108	2.824	3.682	18.614	600	3.102	2.052	1.833	60.438	9.126	13.011	.021685	26
27	31	12.108	2.824	3.682	18.614	620	3.002	2.052	1.833	61.438	9.277	13.162	.021229	27
28	32	12.108	2.824	3.682	18.614	640	2.908	2.052	1.833	62.438	9.428	13.313	.020802	28
29	33	12.108	2.824	3.682	18.614	660	2.820	2.052	1.833	63.438	9.579	13.464	.020400	29
30	34	12.108	2.824	3.682	18.614	680	2.737	2.052	1.833	64.438	9.730	13.615	.020022	30
31	35	12.108	2.824	3.682	18.614	700	2.659	2.052	1.833	65.438	9.881	13.766	.019666	31
32	36	12.108	2.824	3.682	18.614	720	2.585	2.052	1.833	66.438	10.032	13.917	.019329	32
33	37	12.108	2.824	3.682	18.614	740	2.515	2.052	1.833	67.438	10.183	14.068	.019011	33
34	38	12.108	2.824	3.682	18.614	760	2.449	2.052	1.833	68.438	10.334	14.219	.018709	34
35	39	12.108	2.824	3.682	18.614	780	2.386	2.052	1.833	69.438	10.485	14.370	.018423	35
36	40	12.108	2.824	3.682	18.614	800	2.327	2.052	1.833	70.438	10.636	14.521	.018152	36
37	41	12.108	2.824	3.682	18.614	820	2.270	2.052	1.833	71.438	10.787	14.672	.017893	37
38	42	12.108	2.824	3.682	18.614	840	2.216	2.052	1.833	72.438	10.938	14.823	.017646	38
39	43	12.108	2.824	3.682	18.614	860	2.164	2.052	1.833	73.438	11.089	14.974	.017412	39
40	44	12.108	2.824	3.682	18.614	880	2.115	2.052	1.833	74.438	11.240	15.125	.017188	40
41	45	12.108	2.824	3.682	18.614	900	2.068	2.052	1.833	75.438	11.391	15.276	.016973	41
42	46	12.108	2.824	3.682	18.614	920	2.023	2.052	1.833	76.438	11.542	15.427	.016768	42
43	47	12.108	2.824	3.682	18.614	940	1.980	2.052	1.833	77.438	11.693	15.578	.016572	43
44	48	12.108	2.824	3.682	18.614	960	1.939	2.052	1.833	78.438	11.844	15.729	.016385	44
45	49	12.108	2.824	3.682	18.614	980	1.899	2.052	1.833	79.438	11.995	15.880	.016204	45
46	50	12.108	2.824	3.682	18.614	1,000	1.861	2.052	1.833	80.438	12.146	16.031	.016031	46
47	51	12.108	2.824	3.682	18.614	1,020	1.825	2.052	1.833	81.438	12.297	16.182	.015865	47
48	52	12.108	2.824	3.682	18.614	1,040	1.790	2.052	1.833	82.438	12.448	16.333	.015705	48
49	53	12.108	2.824	3.682	18.614	1,060	1.756	2.052	1.833	83.438	12.599	16.484	.015551	49
50	54	12.108	2.824	3.682	18.614	1,080	1.724	2.052	1.833	84.438	12.750	16.635	.015403	50
51	55	12.108	2.824	3.682	18.614	1,100	1.692	2.052	1.833	85.438	12.901	16.786	.015260	51
52	56	12.108	2.824	3.682	18.614	1,120	1.662	2.052	1.833	86.438	13.052	16.937	.015122	52
53	57	12.108	2.824	3.682	18.614	1,140	1.633	2.052	1.833	87.438	13.203	17.088	.014989	53
54	58	12.108	2.824	3.682	18.614	1,160	1.605	2.052	1.833	88.438	13.354	17.239	.014861	54
55	59	12.108	2.824	3.682	18.614	1,180	1.577	2.052	1.833	89.438	13.505	17.390	.014737	55
56	60	12.108	2.824	3.682	18.614	1,200	1.551	2.052	1.833	90.438	13.656	17.541	.014618	56
57	61	12.108	2.824	3.682	18.614	1,220	1.526	2.052	1.833	91.438	13.807	17.692	.014502	57
58	62	12.108	2.824	3.682	18.614	1,240	1.501	2.052	1.833	92.438	13.958	17.843	.014390	58
59	63	12.108	2.824	3.682	18.614	1,260	1.477	2.052	1.833	93.438	14.109	17.994	.014281	59
60	64	12.108	2.824	3.682	18.614	1,280	1.454	2.052	1.833	94.438	14.260	18.145	.014176	60

1/ (a) Territorial average tare weight: 22.6 tons. Computed by weighting the tare weight of each reporting carrier in the given territory by the number of carloads handled by each carrier in this type of car.
(b) Territorial ratio of empty to loaded car-miles: 33.5%. Computed by weighting the ratio for each reporting carrier in the territory for the type of car shown by the number of carloads handled by each carrier in this type of car.
(c) Equated empty tare tons: 7.638 tons. (Line (a) x line (b)).
(d) Total territorial tare weight: 30.438 tons. (Line (a) + line (c)).
2/ Table 87, twice column (13).
3/ Table 87, twice column (22). Where costs are developed for equipment rented on a mileage basis (refrigerator cars and tank cars) column (3) is not filled in, since the mileage rental is presumed to include maintenance and rentals chargeable to the terminal operations as well as the line haul.
4/ Table 87, twice column (31).
5/ Cost computed for loaded and empty directions in terms of the loaded direction only. Lines (a) and (b) used for railroad owned equipment and lines (c) and (d) for equipment rented on a mileage basis. The amounts from lines (b) or (d) are carried forward to column (8)

Item	Source	Amount: Railroad owned equipment	Amount: Cars rented on mileage basis
(a) R.R. owned equipment, cost per mile, loaded direction	Table 87, column (3)	1.377	xxx
(b) R.R. owned equipment, cost per mile, loaded + empty ret.	Line (a) x (1.0 + .335 ratio) from 1/, line (b)	2.052	xxx
(c) Equipment rented on mileage basis, cost per mile loaded direction	Cost per mile from AAR Mileage Tariffs, Series 7, ___ (1.0 + ___ ratio of traffic general and misc. overheads and items in all other expenses incl. repairs, rents.)	xxx	xxx
(d) Equipment rented on mileage basis, cost per mile loaded plus empty return	Line (c) x (1.0 + _____ ratio) from 1/, line (b)	xxx	xxx

6/ Cost computed for loaded and empty directions in terms of loaded direction only. Cost per car-mile from Table 87, column (6), 1.373 cents x (1.0 + .335 ratio) from 1/, line (b).
7/ Cost per gross ton-mile from Table 87, column (10).

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Procedure Used in the Assembly of Less-carload Unit Costs

Table 89.--Statement Showing the Procedure Used in the Assembly of Less-Carload Unit Costs for the Purpose of Computing the Less-Carload Cost Scales 1/
For Purposes of Illustration, the Expenses Are Those Compiled for the United States, Territory No. 12

Line No.	Expenses independent of distance (origin plus destination)									Expenses treated as proportional to the length of haul										Line No.
	Net load per less-carload car (tons)	Org. IV Less-carload switching expenses, frthouse. per loaded car 2/	Org. VI Less-carload frt. train car maint. & rentals switching expe. per loaded car 3/	Orgs. IV & VI Switching plus freight train car expenses per ton (Cols. (2) + (3))÷Col.(1))	Org. VIII Less-carload station clerical expenses per ton 4/	Org. IX Less-carload station platform handling per ton 5/	Total less-carload switching expe., frt. train car expe.(terminal) & station expe. per ton (Cols.(4),(5) and (6))	Number of cwt. per net load (Col. (1) x 20 cwt.)	Total switching frt. train car expe.(terminal) station clerical and platform expe. per cwt. (Col.(7)÷20 cwt.)	Org. I Less-carload frt. train expenses - running, per loaded car-mile 6/	Org. II Less-carload running expe. common to all cars incl. interchange & intertrain switching per loaded car-mile 7/	Org. V Less-carload freighthouse switching expe. acct. transfer stated in terms of loaded car-miles (Table 87, col.(19))	Org. VII Less-carload frt. train car expe. (terminal) acct. transfer stated in terms of loaded car-miles (Table 87, col.(28))	Subtotal running expenses stated in terms of loaded car-miles, incl. empty return (Cols.(10),(11), (12) and (13))	Gross tons of car and contents, incl. empty return 8/	Org. III Less-carload running expe. treated on GTM basis and converted to cost per loaded car-mile (Col. (15) x .151 cents per GTM) 9/	Subtotal running expe. treated on loaded car-mile basis, incl. empty return (Col. (14)+col.(16))	Subtotal running expe. per 100 lbs. of net load per mile (Col.(17) ÷ col. (8))	Total running expe. per 100 lbs. per mile, incl. station platform expe., account transfer (Col.(18)+.01113 cents per 100 lbs.) 10/	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	
									(Cents)	(Cents)	(Cents)	(Cents)	(Cents)	(Cents)		(Cents)	(Cents)	(Cents)	(Cents)	
1	1.0	$8.672	$1.492	$10.164	$3.530	$2.220	$15.914	20	79.570	2.052	1.833	1.011	0.172	5.068	31.438	4.747	9.815	0.49075	0.50188	1
2	1.5	8.672	1.492	6.776	3.530	2.220	12.526	30	62.630	2.052	1.833	1.011	.172	5.068	31.938	4.823	9.891	.32970	.34083	2
3	2.0	8.672	1.492	5.082	3.530	2.220	10.832	40	54.160	2.052	1.833	1.011	.172	5.068	32.438	4.898	9.966	.24915	.26028	3
4	2.5	8.672	1.492	4.066	3.530	2.220	9.816	50	49.080	2.052	1.833	1.011	.172	5.068	32.938	4.974	10.042	.20084	.21197	4
5	3.0	8.672	1.492	3.388	3.530	2.220	9.138	60	45.690	2.052	1.833	1.011	.172	5.068	33.438	5.049	10.117	.16852	.17975	5
6	3.5	8.672	1.492	2.904	3.530	2.220	8.654	70	43.270	2.052	1.833	1.011	.172	5.068	33.938	5.125	10.193	.14561	.15674	6
7	4.0	8.672	1.492	2.541	3.530	2.220	8.291	80	41.455	2.052	1.833	1.011	.172	5.068	34.438	5.200	10.268	.12835	.13948	7
8	4.5	8.672	1.492	2.259	3.530	2.220	8.009	90	40.045	2.052	1.833	1.011	.172	5.068	34.938	5.276	10.344	.11493	.12606	8
9	5.0	8.672	1.492	2.033	3.530	2.220	7.783	100	38.915	2.052	1.833	1.011	.172	5.068	35.438	5.351	10.419	.10419	.11532	9
10	5.5	8.672	1.492	1.848	3.530	2.220	7.598	110	37.990	2.052	1.833	1.011	.172	5.068	35.938	5.427	10.495	.09541	.10654	10
11	6.0	8.672	1.492	1.694	3.530	2.220	7.444	120	37.220	2.052	1.833	1.011	.172	5.068	36.438	5.502	10.570	.08808	.09921	11
12	6.5	8.672	1.492	1.564	3.530	2.220	7.314	130	36.570	2.052	1.833	1.011	.172	5.068	36.938	5.578	10.646	.08189	.09302	12
13	7.0	8.672	1.492	1.452	3.530	2.220	7.202	140	36.010	2.052	1.833	1.011	.172	5.068	37.438	5.653	10.721	.07658	.08771	13
14	7.5	8.672	1.492	1.355	3.530	2.220	7.105	150	35.525	2.052	1.833	1.011	.172	5.068	37.938	5.729	10.797	.07198	.08311	14
15	8.0	8.672	1.492	1.271	3.530	2.220	7.021	160	35.105	2.052	1.833	1.011	.172	5.068	38.438	5.804	10.872	.06795	.07908	15
16	8.5	8.672	1.492	1.196	3.530	2.220	6.946	170	34.730	2.052	1.833	1.011	.172	5.068	38.938	5.880	10.948	.06440	.07553	16
17	9.0	8.672	1.492	1.129	3.530	2.220	6.879	180	34.395	2.052	1.833	1.011	.172	5.068	39.438	5.955	11.023	.06124	.07237	17
18	9.5	8.672	1.492	1.070	3.530	2.220	6.820	190	34.100	2.052	1.833	1.011	.172	5.068	39.938	6.031	11.099	.05842	.06955	18
19	10.0	8.672	1.492	1.016	3.530	2.220	6.766	200	33.830	2.052	1.833	1.011	.172	5.068	40.438	6.106	11.174	.05587	.06700	19
20	10.5	8.672	1.492	.968	3.530	2.220	6.718	210	33.590	2.052	1.833	1.011	.172	5.068	40.938	6.182	11.250	.05357	.06470	20
21	11.0	8.672	1.492	.924	3.530	2.220	6.674	220	33.370	2.052	1.833	1.011	.172	5.068	41.438	6.257	11.325	.05148	.06261	21
22	11.5	8.672	1.492	.884	3.530	2.220	6.634	230	33.170	2.052	1.833	1.011	.172	5.068	41.938	6.333	11.401	.04957	.06070	22
23	12.0	8.672	1.492	.847	3.530	2.220	6.597	240	32.985	2.052	1.833	1.011	.172	5.068	42.438	6.408	11.476	.04782	.05895	23
24	12.5	8.672	1.492	.813	3.530	2.220	6.563	250	32.815	2.052	1.833	1.011	.172	5.068	42.938	6.484	11.552	.04621	.05734	24
25	13.0	8.672	1.492	.782	3.530	2.220	6.532	260	32.660	2.052	1.833	1.011	.172	5.068	43.438	6.559	11.627	.04472	.05585	25
26	13.5	8.672	1.492	.753	3.530	2.220	6.503	270	32.515	2.052	1.833	1.011	.172	5.068	43.938	6.635	11.703	.04334	.05447	26
27	14.0	8.672	1.492	.726	3.530	2.220	6.476	280	32.380	2.052	1.833	1.011	.172	5.068	44.438	6.710	11.778	.04206	.05319	27
28	14.5	8.672	1.492	.701	3.530	2.220	6.451	290	32.255	2.052	1.833	1.011	.172	5.068	44.938	6.786	11.854	.04088	.05201	28
29	15.0	8.672	1.492	.678	3.530	2.220	6.428	300	32.140	2.052	1.833	1.011	.172	5.068	45.438	6.861	11.929	.03976	.05089	29

1/ Unless otherwise indicated, the less carload assembly is based on movement of less-carload traffic in box cars.
2/ From Table 87, twice column (16).
3/ From Table 87, twice column (25).
4/ From Table 87, twice column (34).
5/ From Table 87, twice column (37).
6/ Cost computed for loaded and empty directions in terms of the loaded direction only. Amount for line (b) carried forward to column (10).

Line		Source	Amount
(a)	Cost per mile, loaded direction	Table 87, column (3)	1.537
(b)	Cost per mile, loaded plus empty return	Line (a) x (1.0 + .335 ratio) See Table 88 1/, line (b)	2.052

7/ Cost computed for loaded and empty directions in terms of loaded direction only. Cost per car-mile from Table 88, column (9).
8/ Computed as follows: Column (1) + 30.438 tare tons, loaded plus empty direction, from Table 88, footnote 1, line (d).
9/ Cost per gross ton-mile from Table 87, column (10).
10/ Cost per net ton mile .2225 (cents), from Table 87, column (40) divided by 20 cwt.

Average Load Per Car by Commodities, Districts and Regions

Class No.	Commodity group or class	New England region	Eastern district excluding New England region 2/	Eastern district including New England region	Pocahontas region	Southern region	Southwestern region	Western district	United States
		(tons)	(tons)	(tons)	(tons)	(tons)	(tons)	(tons)	(tons)
	GROUP I. PRODUCTS OF AGRICULTURE (C. L.)								
10	Wheat	47.7	45.9	46.1	41.1	44.8	47.6	45.6	45.6
20	Corn	41.7	42.7	42.6	37.7	42.2	40.1	42.0	42.2
30	Oats	30.6	31.0	30.9	26.9	29.4	30.2	33.5	31.9
40	Barley and rye	37.4	40.6	40.4	30.4	38.5	38.4	40.9	40.8
41	Rice	27.6	29.2	29.1	24.6	19.8	29.4	30.4	27.9
42	Grain, N. O. S.	22.4	29.4	28.7	26.5	23.4	24.0	28.7	28.3
50	Flour, wheat	26.2	26.7	26.6	22.7	21.9	24.7	25.6	25.5
51	Meal, corn	28.7	25.8	26.1	21.9	23.3	23.3	25.3	25.0
52	Flour and meal, edible, N. O. S.	25.3	25.0	25.0	23.8	20.5	23.2	25.0	24.0
60	Cereal food preparations, edible, N. O. S.	19.6	18.5	18.6	18.9	20.1	19.7	20.3	19.3
61	Mill products, N. O. S.	23.6	23.6	23.6	22.1	21.8	23.1	23.8	23.4
70	Hay and alfalfa	13.1	12.6	12.8	12.4	12.9	14.0	14.7	13.3
71	Straw	13.3	15.4	15.0	13.0	16.8	16.4	14.7	15.1
80	Tobacco, leaf	14.0	13.3	13.4	11.2	10.6	19.0	15.6	11.1
90	Cotton in bales	21.3	25.3	23.1	22.9	18.1	18.7	17.3	18.3
91	Cotton linters, motes, and regins	15.6	19.3	18.3	20.0	17.7	22.7	22.8	19.0
100	Cottonseed	-	19.4	19.4	20.1	27.0	28.5	29.0	27.9
101	Cottonseed meal and cake	25.0	25.4	25.3	25.0	25.7	27.4	26.3	25.9
110	Oranges and grapefruit	18.2	18.2	18.2	16.5	17.6	17.2	17.6	17.8
111	Lemons, limes, and citrus fruits, N. O. S.	17.1	17.2	17.2	17.6	17.2	17.1	17.4	17.3
120	Apples, fresh	15.3	15.5	15.5	14.4	16.3	16.0	18.2	17.1
121	Bananas	10.5	10.6	10.6	10.6	10.8	10.6	10.7	10.7
122	Berries, fresh	17.3	18.3	18.1	8.8	8.9	9.5	17.0	15.1
123	Cantaloupes and melons, N. O. S.	11.5	11.4	11.4	12.2	11.4	11.3	11.4	11.4
124	Grapes, fresh	17.2	17.1	17.1	17.2	17.0	16.9	17.1	17.1
125	Peaches, fresh	11.0	11.3	11.3	11.1	11.2	12.0	14.7	12.6
126	Watermelons	14.1	13.4	13.5	13.7	13.1	12.7	12.7	13.3
127	Fruits, fresh, domestic, N. O. S.	15.2	16.1	16.0	18.0	16.2	16.3	16.8	16.6
128	Fruits, fresh, tropical, N. O. S.	13.5	12.8	12.9	12.3	12.0	13.3	13.5	12.4
130	Potatoes, other than sweet	19.7	17.4	18.7	16.0	16.0	16.8	17.3	17.7
140	Cabbage	12.7	12.6	12.6	12.4	12.4	12.8	13.1	12.7
141	Onions	13.1	13.1	13.1	12.9	13.4	13.7	14.1	13.6
142	Tomatoes	10.7	11.7	11.6	10.5	10.6	10.9	11.0	11.1
143	Vegetables, fresh, N. O. S.	11.4	11.7	11.6	11.0	11.2	11.4	11.8	11.7
150	Beans and peas, dried	21.2	26.2	25.9	29.3	29.1	30.5	30.9	28.5
151	Fruits, dried or evaporated	22.7	26.8	26.2	26.1	31.1	32.5	29.2	28.8
152	Vegetables, dry, N. O. S.	13.5	13.5	14.0	14.1	14.1	12.8	13.6	13.9
160	Vegetable-oil cake and meal, except cottonseed	24.4	5.8	25.7	24.8	26.3	23.5	23.5	25.1
161	Peanuts	16.3	5.4	15.5	15.4	15.4	18.0	17.3	15.8
162	Flaxseed	20.8	43.7	43.5	17.3	31.7	38.8	40.6	40.9
163	Sugar beets	-	34.1	34.1	15.0	30.0	33.9	44.8	44.3
164	Products of agriculture, N. O. S.	22.2	30.0	29.2	23.1	28.1	27.5	27.8	28.4
(800)	Total products of agriculture	21.3	24.2	23.6	18.9	19.2	23.1	26.3	24.1
	GROUP II. ANIMALS AND PRODUCTS (C. L.)								
170	Horses, mules, ponies, and asses	12.1	12.0	12.0	11.5	11.9	12.0	12.0	12.0
180	Cattle and calves, single-deck	10.9	11.8	11.7	11.9	10.8	10.5	11.2	11.3
181	Calves, double-deck	12.3	12.3	12.3	11.6	13.1	13.4	13.5	13.0
190	Sheep and goats, single-deck	6.1	7.4	7.4	6.3	8.5	6.0	6.3	6.9
191	Sheep and goats, double-deck	9.3	9.5	9.5	9.2	9.5	10.2	10.3	10.1
200	Hogs, single-deck	8.8	8.3	8.4	7.7	8.4	8.2	7.8	8.0
201	Hogs, double-deck	12.7	12.5	12.6	12.5	12.5	13.2	13.2	12.8
210	Fresh meats, N. O. S.	11.2	11.7	11.6	12.9	12.3	11.6	12.0	11.8
220	Meats, cured, dried, or smoked	15.5	14.9	15.0	14.7	15.0	15.9	16.8	15.4
221	Butterine and margarine	12.1	12.0	12.0	12.6	12.1	12.5	13.2	12.3
222	Packing-house products, edible, N. O. S., not including canned meats	16.1	17.0	17.0	14.7	17.1	16.0	17.2	17.0
230	Poultry, live	9.3	8.1	8.1	8.2	8.6	8.2	8.2	8.2
231	Poultry, dressed	11.9	11.9	11.9	12.2	11.5	11.5	12.3	12.0
240	Eggs	11.3	11.7	11.6	10.9	11.1	11.8	11.8	11.7
250	Butter	12.3	12.5	12.5	12.2	11.5	11.8	12.4	12.4
251	Cheese	13.6	14.2	14.1	14.4	14.1	16.7	14.9	14.4
260	Wool	12.7	13.4	13.1	14.9	11.2	13.7	14.3	13.4
270	Hides, green	22.7	23.8	23.6	23.6	24.6	25.8	25.5	24.3
271	Leather	19.4	19.4	19.4	18.1	18.6	18.4	16.9	19.1
280	Fish or sea-animal oil	20.8	26.0	25.4	29.1	29.3	28.3	30.6	28.1
281	Animals, live, N. O. S.	17.5	11.0	12.4	13.5	20.4	24.2	21.3	13.6
282	Animal products, N. O. S. (other than fertilizers and fertilizer materials)	19.7	23.5	22.5	29.9	21.0	26.7	25.1	23.2
(810)	Total animals and products	13.7	13.5	13.5	13.6	13.1	12.2	12.5	13.0
	GROUP III. PRODUCTS OF MINES (C. L.)								
290	Anthracite coal	47.4	50.5	50.3	47.6	37.1	39.1	30.3	50.1
300	Bituminous coal	51.8	54.8	54.7	58.8	51.3	47.0	45.1	53.8
310	Coke	35.3	35.5	35.5	33.3	35.1	40.3	34.9	35.3
320	Iron ore	58.6	72.1	72.0	66.2	61.1	58.0	59.7	64.2
330	Copper ore and concentrates	50.8	61.2	59.9	28.3	46.8	38.4	69.8	69.5
331	Lead ore and concentrates	36.0	47.7	47.7	58.6	48.1	48.6	51.5	50.0
332	Zinc ore and concentrates	-	50.8	50.8	52.8	56.4	57.3	53.1	52.3
333	Ores and concentrates, N. O. S.	32.5	55.8	55.5	58.5	58.7	57.5	52.4	54.6
350	Gravel and sand (other than glass or molding)	50.5	56.8	56.7	56.8	54.9	55.1	56.5	56.3
351	Stone, broken, ground, or crushed	58.7	56.6	56.8	55.9	55.0	54.3	54.9	55.6
352	Stone, rough, N. O. S.	39.5	50.0	48.9	50.7	42.6	42.8	44.8	44.0
353	Stone, finished, N. O. S.	27.9	30.4	29.9	30.6	34.2	34.0	33.2	31.6
360	Petroleum, crude	27.3	35.9	35.9	37.6	36.3	35.2	35.8	35.9
370	Asphalt (natural, by-product, or petroleum)	35.5	36.1	36.1	37.3	35.9	34.6	35.9	36.0
380	Salt	32.6	33.0	33.0	32.6	30.2	30.8	31.7	32.2
390	Phosphate rock, crude (ground or not ground)	67.2	44.1	44.5	47.9	53.8	50.8	57.7	53.5
391	Sulphur (brimstone)	41.4	41.3	41.3	51.3	47.0	52.2	55.1	52.4
392	Products of mines, N.O.S.	36.0	53.5	52.4	50.7	44.1	49.3	48.6	50.7
(820)	Total products of mines	46.5	53.3	53.0	58.0	50.5	47.6	50.4	52.7

Class No.	Commodity group or class	New England region	Eastern district excluding New England region 2/	Eastern district including New England region	Pocahontas region	Southern region	Southwestern region	Western district	United States
		(tons)	(tons)	(tons)	(tons)	(tons)	(tons)	(tons)	(tons)
	GROUP IV. PRODUCTS OF FORESTS (C. L.)								
400	Logs	31.3	26.1	26.6	27.3	34.2	40.1	38.6	38.4
401	Posts, poles, and piling	24.2	28.3	28.1	28.3	26.4	29.	26.8	27.0
402	Wood (fuel)	30.5	27.3	27.5	37.4	29.6	36.0	33.5	32.3
410	Ties, railroad	29.9	30.0	29.8	32.3	33.7	35.7	36.7	33.2
420	Pulp wood	29.8	28.9	29.4	32.5	18.6	43.9	37.8	36.2
430	Lumber, shingles, and lath	25.4	25.9	25.8	25.3	25.0	26.2	27.4	26.3
431	Box, crate, and cooperage materials	20.7	21.9	21.7	22.6	20.9	23.5	23.2	22.0
432	Veneer and built-up wood	24.3	24.4	24.4	22.6	23.5	25.0	26.8	25.6
440	Resin	24.6	24.7	24.7	22.3	24.3	26.2	26.1	24.5
441	Turpentine	20.1	25.0	24.7	25.7	24.2	21.8	23.1	24.3
442	Crude rubber (not reclaimed)	29.5	32.6	32.9	33.5	32.2	36.9	34.5	32.1
443	Products of forests, N. O. S.	17.0	16.7	16.8	23.6	26.6	20.9	22.1	20.9
(830)	Total products of forests	25.6	25.3	25.3	26.3	27.7	28.9	30.6	28.4
	GROUP V. MANUFACTURES AND MISCELLANEOUS (C. L.)								
450	Petroleum oils, refined, and all other gasolines	28.8	28.3	28.3	28.3	28.4	27.0	27.1	27.6
451	Fuel, road, and petroleum residual oils, N. O. S.	33.9	31.9	32.2	29.7	31.6	31.9	33.3	32.7
452	Lubricating oils and greases	20.1	22.8	22.7	20.3	20.6	21.7	21.5	22.0
453	Petroleum products, N. O. S.	22.7	21.8	21.9	23.3	26.5	25.6	22.5	22.4
460	Cottonseed oil	23.1	29.4	29.0	31.1	29.7	29.9	30.1	29.6
461	Linseed oil	25.6	28.2	28.0	22.6	22.4	23.6	25.9	27.0
462	Vegetable oils, N. O. S.	33.9	28.8	29.1	29.1	47.8	30.0	29.9	29.3
470	Sugar (beet or cane)	26.3	31.0	30.5	26.9	32.9	37.6	37.4	34.6
471	Table sirups and edible molasses	28.7	33.7	33.0	27.6	28.1	31.8	32.5	31.9
472	Molasses, blackstrap and beet residual	37.8	43.5	42.8	41.9	45.8	46.0	47.7	46.1
490	Iron, pig	52.6	55.1	54.9	55.5	57.1	56.9	55.8	55.5
491	Iron and steel, rated 6th class in official classification, N. O. S.	40.8	51.1	51.0	41.2	47.0	43.7	51.9	51.0
500	Nails, fastenings, frogs, and switches	48.3	42.8	43.0	40.0	41.3	48.0	48.4	44.1
510	Cast-iron pipe and fittings	21.6	23.3	23.0	23.2	26.1	26.5	26.8	25.1
511	Iron and steel pipe and fittings, N. O. S.	23.4	29.8	29.6	23.7	26.8	33.8	32.5	30.1
512	Iron and steel: Nails and wire, not woven	23.5	25.6	25.4	23.9	25.7	26.2	28.3	26.0
513	Iron and steel, rated 5th class in official classification, N. O. S. (also tin and terne plate)	28.2	33.5	33.1	30.0	29.4	31.7	34.0	32.9
520	Copper: Ingot, matte, and pig	45.4	44.9	45.1	24.2	52.9	52.3	51.2	48.1
521	Copper, brass, and bronze: Bar, sheet, and pipe	16.8	30.2	26.8	16.7	18.7	51.5	52.8	37.8
522	Lead and zinc: Ingot, pig, or bar	41.9	43.5	43.4	43.3	46.1	48.7	48.3	45.4
523	Aluminum: Ingot, pig, or slab	38.3	37.4	37.3	42.2	44.5	30.0	29.0	38.9
530	Machinery and boilers	15.5	18.3	17.8	17.2	16.9	18.4	19.1	18.0
540	Cement, natural or Portland (building)	34.6	35.1	35.1	33.9	34.2	34.2	35.1	34.9
550	Brick, common	38.0	42.0	41.5	38.0	37.4	35.8	35.0	37.8
551	Brick, N. O. S., and building tile	33.2	37.0	36.8	37.3	32.2	34.9	35.0	35.9
552	Artificial stone, N. O. S.	25.4	29.2	28.6	32.2	29.3	31.7	31.8	29.5
560	Lime, common (quick or slaked)	26.7	29.1	28.8	30.7	26.8	28.4	28.6	28.5
561	Plaster (stucco or wall) and dry kalsomine	22.5	23.8	23.7	22.6	23.3	23.8	24.5	23.9
570	Sewer pipe and drain tile (not metal)	16.4	16.8	16.8	19.3	17.1	17.7	17.5	17.1
580	Agricultural implements and parts, N. O. S.	16.4	15.2	15.2	15.7	16.3	15.5	15.0	15.2
581	Vehicles, horse-drawn, and parts, N. O. S.	12.4	14.3	14.2	13.0	13.9	13.6	13.1	13.7
582	Tractors and parts	14.2	15.7	15.7	14.5	14.8	14.6	14.9	15.1
583	Railway car wheels, axles, and trucks	22.1	31.3	31.0	29.3	29.9	33.3	31.0	30.8
590	Automobiles (passenger)	6.0	6.1	6.0	6.1	6.0	6.1	6.1	6.0
591	Autotrucks	7.3	9.4	9.2	9.2	7.9	7.1	7.3	8.2
592	Automobiles and autotrucks, N. O. S. and parts, N. O. S.	18.1	18.2	18.2	18.2	20.1	19.3	18.6	18.4
593	Automobile and autotruck tires	12.0	14.3	14.1	13.0	14.4	17.7	17.3	14.8
610	Furniture, metal	9.9	10.1	10.1	10.1	10.0	11.7	11.4	10.5
611	Furniture, other than metal	8.0	8.2	8.1	7.9	7.9	9.3	9.0	8.3
620	Beverages	21.2	22.3	22.1	21.8	22.3	25.2	23.5	22.8
630	Ice	29.9	30.0	29.9	25.2	24.5	19.8	27.4	27.6
640	Fertilizers, N. O. S.	26.3	30.0	29.6	31.4	31.4	31.8	34.1	31.3
650	Newsprint paper	26.5	26.9	26.7	26.2	26.4	27.7	27.4	26.9
651	Printing paper, N. O. S.	21.9	22.5	22.3	23.9	22.2	23.7	23.9	22.6
660	Alcohol, denatured or wood	20.1	22.9	22.7	24.0	24.5	23.7	21.7	22.9
661	Sulphuric acid	45.9	49.5	49.4	53.9	52.8	50.3	49.0	50.5
662	Explosives, N. O. S.	18.8	17.1	17.3	15.4	18.2	14.4	16.2	16.9
670	Cotton cloth and cotton fabrics, N. O. S.	11.5	11.8	11.7	12.5	11.6	14.1	14.6	11.8
671	Bagging and bags, burlap, gunny, or jute	17.0	18.8	18.4	18.3	17.3	18.8	19.4	18.5
680	Canned food products, N. O. S.	21.5	22.5	22.4	21.9	23.0	26.2	26.4	24.0
690	Tobacco, manufactured products	16.1	19.1	19.0	19.7	19.6	20.8	20.8	19.8
691	Paints in oil and varnishes	19.8	21.7	21.4	20.3	22.7	21.6	24.6	22.4
692	Furnace slag	38.2	58.0	58.0	60.5	49.2	52.3	52.5	54.9
693	Scrap iron and scrap steel	38.8	42.3	42.0	41.2	42.6	44.1	44.9	42.7
694	Paper bags and wrapping paper	22.1	21.9	21.9	23.1	23.2	24.1	23.8	22.8
695	Paperboard, pulpboard, and wallboard (paper)	20.6	20.9	20.9	20.2	21.6	22.4	23.6	21.6
696	Building paper and prepared roofing materials	22.3	21.8	21.9	22.9	23.4	23.1	23.2	22.5
697	Building woodwork (millwork)	18.3	19.6	19.5	18.7	20.1	21.2	21.3	20.6
698	Soap and washing compounds	22.9	21.5	21.7	21.2	21.2	21.0	21.3	21.6
699	Glass, flat, other than plate	24.9	26.4	26.3	25.0	25.8	29.9	30.3	28.5
700	Glass: Bottles, jars, and jelly glasses	16.7	17.4	17.3	17.1	17.6	17.5	18.0	17.4
701	Manufactures and miscellaneous, N. O. S.	19.8	21.4	21.2	20.5	21.7	20.2	20.5	21.2
(840)	Total manufactures and miscellaneous	22.7	26.1	25.7	25.6	25.9	25.9	26.0	25.8
(850)	Grand total, carload traffic	25.8	27.0	26.9	27.3	31.8	28.6	31.1	29.5
701A	Forwarder traffic included in Class 701	10.6	11.3	11.2	12.3	12.4	14.1	14.9	12.2

1/ The average load is obtained by dividing the number of tons of total freight traffic by the number of carloads, Freight Commodity Statistics Statement No. 40100 (1939) Table 3. The railroads included in each of the regions and districts listed are the same as those used for the purpose of compiling the Freight Commodity Statistics, with the exception of the Eastern district. See footnote 2.

2/ Based on combination of data shown for Great Lakes Region and Central Eastern Region.

Note:--The average load per car represents an average based on the sum of the tons originated and the tons received from connections divided by the corresponding number of carloads, thereby including duplications in each territory. This is necessary to give effect in each territory to the total traffic handled. The average load per car originated would differ slightly from the averages shown. For the average load of less-carload traffic see text p. 35

Rail - Form A, 1-41

Exhibit No. _____

Witness _____

EXHIBIT 4

ICC Docket 28300 - Class Rate Investigation, 1939
ICC Docket 28310 - Consolidated Freight Classification

Railway

Freight Service Costs

For the year 1939

Computed by the Bureau of Statistics
Interstate Commerce Commission

By _____
(Name of Carrier)

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Less-carload Cost Scales	-	Less-carload distance cost scales for net loads of from 1.0 to 7.5 tons and hauls of from 10 to 3,500 miles, inclusive. (Additional sheets were used as needed to provide for net loads of more than 7.5 tons).

INTRODUCTORY REMARKS

1. (a) This rail cost formula, designated as Rail - Form A, is one of several developed by the Bureau of Statistics for use in different types of cases. Form A is intended to develop costs based upon respondent's system average operations, including main and branch lines, through and way trains, and large and small terminals.

(b) The formula provides for several levels of cost based upon a distribution of respondent's operating expenses, rents and taxes, and return on value, to the movement of the traffic, giving consideration to the following:

1. Length of haul,
2. Net weight of load,
3. Tare weight of car,
4. Percent of empty return movement of the equipment,
5. Volume of switching service (carload versus less-carload),
6. Car rental expenses paid, if any.

The levels of cost are as follows:

I. Carload and less-carload out-of-pocket costs. (Based on the application of the formula to the out-of-pocket portion of each account).

II. Carload and less-carload freight operating expenses, rents and taxes.

III(a). Carload and less-carload operating expenses, rents and taxes, plus an allowance for a return at 4 percent, upon the carload and less-carload portions of the value of the property.

III(b). Carload and less-carload operating expenses, rents and taxes, plus an allowance for a return at 5-3/4 percent upon the carload and less-carload portions of the value of the property.

IV. Carload operating expenses, rents and taxes, plus less-carload and passenger operating deficits, but excluding return.

V(a). Carload operating expenses, rents and taxes, plus less-carload and passenger operating deficits and a return at 4 percent upon the total value of the property, including the less-carload and passenger portions.

V(b). Carload operating expenses, rents and taxes, plus less-carload and passenger operating deficits, and a return at 5-3/4 percent upon the total value of the property, including the less-carload and passenger portions.

(c) The formula provides for the computation of the passenger and less-carload deficits. These deficits represent that portion of the total operating expenses, rents and taxes (with and without an allowance for return) which were assigned to the passenger and less-carload services and which the revenues from those services during the annual period covered by the study were unable to meet. The amount of the deficit apportioned to any given carload traffic movement is based upon the freight service expenses assigned assigned and apportioned to such carload traffic, i.e., the distribution is based on the relative use which such carload traffic itself makes of respondent's transportation facilities. No consideration is given to the commodity's relative ability to pay.

1 - Continued

(d) The respective levels of cost developed by the formula serve to indicate that average revenue which each 100 pounds of freight would have had to earn during the period studied (considering the length of haul, net weight of load, percent of empty return movement and tare weight of the equipment) to cover the elements of cost indicated. The nature of the commodity carried receives consideration in these scales only through the variation in load per car, and type of car used. Loss and damage receives separate consideration apart from the scales.

(e) This formula does not reflect those rate-making factors which occasion differences in rates which cannot be justified under a strict adherence to a cost of service principle. Such factors include ability to pay, value of service, value of commodity, competitive relationships, degree of manufacture, etc.

2. The steps in filling out this questionnaire are as follows:
   (a) Fill out Schedules A, B, C, D, E, F, G, and H from the accounting and statistical sources indicated.
   (b) Fill out the Territorial Summaries from the sources indicated.
   (c) Fill out the carload and less-carload assembly schedules from the sources indicated.
   (d) Fill out the carload and less-carload cost scales from the sources indicated.

3. Apportionment factors shown throughout the formula should be used only in the absence of data permitting direct assignment.

4. Where cost scales are being developed for individual carriers, observe the following:
   (a) In the development of the unit costs respondent should not include the joint facility debits and credits where it does not also include in its statistics the corresponding service units. (For example, if respondent's expenses include joint facility debits for yard engine operations performed for it by others, but its statistics do not include the corresponding yard engine hours performed, its costs per yard engine hour will be overstated. Similarly, if respondent performs switching service for others and includes in its statistics the total engine hours for such work performed, its cost per engine hour will be understated, unless it excludes the corresponding joint facility credit for the amount billed others). Such debits and credits should be assigned to the columns designated "Special services" when they will significantly affect the computation of the unit costs. See paragraph (b) for instructions in this respect.
   (b) Where an annual debit or credit of the nature outlined in (a) above exceeds $_____ for an individual facility (freight portion only) assign such debit or credit to the column designated "Special services". Distribute the remaining joint facility debits and credits on the basis indicated in each schedule hereto.

System Freight Statistics and Locomotive Repair Expenses for 1939 Separated between Territories

_____ Railway

Schedule A
Sheet 1 of 3

Statistics

Line No.	Item (1)	System statistics--Freight Source (2)	Total (3)	(Territory) 1/ (4)	(Territory) 1/ (5)	(Territory) 1/ (6)	(Territory) 1/ (7)	Line No.
	Locomotive-miles							
1	Locomotive-miles, principal, helper and light	A.R. Sch. 531, items 21-23, col.(b)						1
2	Locomotive-miles, train switching	A.R. Sch. 531, item 24, col. (b)						2
3	Locomotive-miles, yard switching	A.R. Sch. 531, item 25, col. (b)						3
4	Total (lines 1 to 3)	A.R. Sch. 531, item 26, col. (b)						4
	Ton-miles							
5	Gross ton-miles of locomotives and tenders	A.R. Sch. 531, item 60, col. (b)						5
6	Gross ton-miles of freight-train cars and contents, excluding cabooses	2/						6
7	Gross ton-miles of passenger-train cars & contents in freight trains	A.R. Sch. 531, item 62, col. (b)						7
	Car-miles							
8	Total car-miles, loaded and empty, including cabooses	A.R. Sch. 531, items 40,41,48,col.(d)						8
9	Car-miles, cars rented on a mileage basis, loaded and empty	Car hire records						9
10	Car-miles, other than mileage cars, loaded & empty, incl. cabooses	Line 8 minus line 9						10
11	Car-miles, other than mileage cars, loaded & empty, excl. cabooses	Line 10 minus caboose miles						11
	Train-miles							
12	Total (with locomotives)	A.R. Sch. 531, item 13, col. (b)						12

Separation of Locomotive Repair Expenses by Territories Based upon the Repair Expenses by Classes of Locomotives and the Mileage Run by Each Class in Each Territory,
(Data to be Supplied Where the Carriers Currently Accumulate Repair Expenses by Classes of Locomotives and the Mileage Run by Each Class in Each Division. Use Added Sheets Where Necessary)
(Show in Columns (9) to (13) System Data for Freight Locomotives or Locomotives Common to both Freight and Passenger Service)

Line No.	Item (8)	System data: Class of locomotive 3/ (9)	Avg. wt. of locos for class (tons) 4/ (10)	Total expenses (11)	Total loco. miles 5/ (12)	Expenses per mile (col. (11) ÷ col. (12)) (13)	(Territory) Loco. miles freight 5/ (14)	(Territory) Expenses (cols. 14 x 13) (15)	(Territory) Loco. miles freight 5/ (16)	(Territory) Expenses (cols. 16 x 13) (17)	(Territory) Loco. miles freight 5/ (18)	(Territory) Expenses (cols. 18 x 13) (19)	(Territory) Loco. miles freight 5/ (20)	(Territory) Expenses (cols. 20 x 13) (21)	Line No.
13	Loco., repairs, Yard (Accts. 308, 311)														13
14	" " " "														14
15	" " " "														15
16	" " " "														16
17	" " " "														17
18	" " " "														18
19	" " " "														19
20	Total	XXX	XXX			XXX	XXX		XXX		XXX		XXX		20
21	Loco., repairs, other (Accts. 308, 311)														21
22	" " " "														22
23	" " " "														23
24	" " " "														24
25	" " " "														25
26	" " " "														26
27	" " " "														27
28	" " " "														28
29	" " " "														29
30	" " " "														30
31	" " " "														31
32	" " " "														32
33	" " " "														33
34	" " " "														34
35	" " " "														35
36	Total	XXX	XXX			XXX	XXX		XXX		XXX		XXX		36

1/ Name the divisions assigned to each territory for the purpose of Schedules A, B, & C of this statement:

_____ Territory includes _____ (Div's)
_____ Territory includes _____ (Div's)
_____ Territory includes _____ (Div's)
_____ (Div's)
_____ (Div's)

2/ A.R. Schedule 531, item 61, column (b) minus caboose ton-miles. Compute the caboose ton-miles by multiplying the caboose car-miles by the average weight of a caboose.

3/ Designate the classes or groups for which the carrier currently compiles its repair costs. The class designation is that used by the carrier for managerial purposes.

4/ Weight of locomotive, including tender two-thirds loaded.

5/ Locomotive miles include principal, helper and light and train switching (if latter available).

Equipment Maintenance and Rental Expenses for 1939 Separated by Classes of Equipment

Railway
Schedule A
Sheet 2 of 3

Line No.	Acct. No.	Item	System freight expenses from Annual Report	Apportionment factors	Steam and other locomotives: Road	Steam and other locomotives: Yard	Freight train cars: Rented on mileage basis	Freight train cars: All other: Mileage portion	Freight train cars: All other: Time portion	Work equipment	Floating equipment 1/: Road (Running)	Floating equipment 1/: Yard (Switching)	Line No.
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
		Maintenance of Equipment											
1	308	Steam locomotives, repairs		Direct			xxx	xxx	xxx	xxx	xxx	xxx	1
2	311	Other locomotives, repairs		Direct			xxx	xxx	xxx	xxx	xxx	xxx	2
3	314	Freight-train cars, repairs		82.70%; 17.30%	xxx	xxx	xxx			xxx	xxx	xxx	3
4	323	Floating equipment, repairs		Direct 1/	xxx	xxx	xxx	xxx	xxx	xxx			4
5	326	Work equipment, repairs		Direct	xxx	xxx	xxx	xxx	xxx		xxx	xxx	5
6		Total, accounts 308-26		-			xxx						6
7		Percentage distribution line 6	$	-	$	$	xxx	$	$	$	$	$	7
8	301-05 328 & 331	Supt. shop mach. misc. equip. rep. & depr., inj., ins.,											
	339-37	staty., & jt. equipment		Line 7			xxx						8
9	339-30	Equipment retirements		Line 10			xxx						9
10	331	Equip. depr. (exch.misc.equip.)		2/			xxx						10
		Equipment Rents											
	503 & 532	Hire of Freight Cars (net):											
11		(a) Cars on mileage basis		Direct	xxx	xxx		xxx	xxx	xxx	xxx	xxx	11
12		(b) Cars on per diem basis		Direct 3/	xxx	xxx	xxx			xxx	xxx	xxx	12
13		(c) Cars on other basis		Direct 3/	xxx	xxx	xxx			xxx	xxx	xxx	13
14	504 & 537	Locomotive rent (net)		Accts. 308, 311			xxx	xxx	xxx	xxx	xxx	xxx	14
15	506 & 539	Floating equipment rent (net)		Acct. 323	xxx	xxx	xxx	xxx	xxx	xxx			15
16	507 & 540	Work equipment rent (net)		Direct	xxx	xxx	xxx	xxx	xxx		xxx	xxx	16
17		Total (lines 8-16, excl. line 7)		-									17
18		Total, less passenger portion of nonrevenue frt. (line 17 x _____ ratio) 4/		-									18

Separation of Equipment Maintenance and Rental Expenses by Territories

Line No.	Item	System data: Source	System data: Expenses	System data: Miles (A.R. Sch. 531)	System data: Unit cost (cols. 15 ÷ 16)	(Territory): Miles (Sch. A, sheet 1)	(Territory): Expenses 5/	(Territory): Miles (Sch. A, sheet 1)	(Territory): Expenses 5/	(Territory): Miles (Sch. A, sheet 1)	(Territory): Expenses 5/	Line No.
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	
	Locomotives, road and yard											
19	Yard locomotives	L.15, col. (6)		LM		LM		LM		LM		19
20	Loco.-train switch. (Exps. = miles x yd. eng. cost per mile)	L.20, col. (16) x L. 19, col. (17) 13/		LM		LM		LM		LM		20
21	Road locomotives--total	L.15, col. (5)		xxx	xxx	xxx		xxx		xxx		21
22	Road locomotives--running	L.21 — L. 20		xxx	xxx	xxx		xxx		xxx		22
23	Rd. loco.--running, loco.-mile portion	40% of L. 22		LM		LM		LM		LM		23
24	Rd. loco.--running, loco.-ton-mile portion	60% of L. 22 6/		LTM 6/		LTM 6/		LTM 6/		LTM 6/		24
	Yard locomotives--Territorial separation											
25	Loco. rep.--yard, Accts. 308, 311	Tot. Sch. A, sheet 1		xxx	xxx	xxx		xxx		xxx		25
26	Shop overheads	L. 25 x ratio 7/		xxx	xxx	xxx		xxx		xxx		26
27	Distr. of depr. retire. & rents on Lm. basis	From col. (6) L.9, 10 and 14		LM		LM		LM		LM		27
28	Total, yd. locos. (L. 25-27) (Insert adj. tot. in line 19) 8/	L. 25-27										28
	Road locomotives--Territorial separation											
29	Loco. repairs--road, Accts. 308, 311	Tot. from Sch. A, sh. 1		xxx	xxx	xxx		xxx		xxx		29
30	Shop overheads	L. 29 x ratio 7/										30
31	Distr. of depr. retire. & rents on LTM t .s	Col. (5), L.9, 10 & 14		LTM 6/		LTM 6/		LTM 6/		LTM 6/		31
32	Tot. rd. locos. (L. 29-31) (Insert adj. tot. in Line 21) 8/	L. 29-31										32
	Frt.-train car exp. (other than mileage)											
33	Running portion	Sch. A, sh. 3, line 32 10/		CM 9/		CM 9/		CM 9/		CM 9/		33
34	Switching portion	Sch. A, sh. 3, line 33 11/										34
35	Loading and unloading portion	Sch. A, sh. 3, line 29 12/										35

(See reverse side for footnotes)

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Footnotes for Schedule A, sheet 2

1/ Repairs to floating equipment to be separated between line and terminal from information supplied by the carriers, where necessary.

2/ Compute depreciation as follows: (Where carrier has no regularly assigned yard engines, omit Parts I, II, III, and apply Part IV)

Part I. Depreciation - Steam locomotives

Item	Source	Amount
(a) Road portion of loco. tons (given weight of 1.2 per Eng. Section, Bu. of Val.)	A.R.Sch.417, p.405, col.(z), (lines 1 plus 2 plus 3) x 1.2	tons
(b) Yd. portion of loco. tons (wt. given 1.0)	A.R.Sch.417, p.405, line 4, col.(z)	tons
(c) Total rd. plus yd. portion loco. tons.	Lines (a) plus (b)	tons
(d) Yd. portion of total tons	Line (b) divided by line (c)	ratio
(e) Total depreciation expense (frt. and passenger)	A.R.Sch. 320, page 308, line 132, col. (b)	$
(f) Yard portion of total depreciation	Lines (d) x (e)	$
(g) Ratio of yd. switching loco. miles, frt., to total yd. switching loco. miles	A.R.Sch. 531, p.508, item 25, col.(b) divided by col.(d)	ratio
(h) Frt. port. of yd. loco. depreciation	Line (f) x line (g)	$
(i) Tot. loco. deprec., frt., road and yard.	A.R.Sch.320, line 132, col.(b)	$
(j) Deprec. steam locos., frt., road portion.	Line (i) minus line (h)	$

Part II. Depreciation - Other locomotives

(k) Tot. weight of internal combustion switchers (yd.)	A.R.Sch.419, col.(j), line 1 x line 7	tons
(l) Wt. of electric locos., switching (yard)	A.R.Sch.417, line 8, col.(z)	tons
(m) Tot. wt. internal combustion and electric locomotives (yard)	Line (k) plus line (l)	tons
(n) Tot. weight electric and internal combustion locomotives, road, plus yard	A.R.Sch.417, p.405, line 9, plus line 10, col.(z).	tons
(o) Ratio of wt., yd. switching locos. to total locos.	Line (m) divided by line (n)	ratio
(p) Total depreciation - other locomotives	A.R.Sch.320, line 133, col.(b)	$
(q) Yd. portion of total loco. depreciation	Line (o) x line (p)	$
(r) Frt. port. of loco. depr., - yard	Line (g) x line (q)	$
(s) Tot. loco. depr., frt., road and yard.	A.R.Sch.320, line 133, col.(e)	$
(t) Depr., other locos., road portion	Line (s) minus line (r)	$

Part III. Total depreciation, steam and other locomotives, separated between road and yard

(u) Road portion	Line (j) plus line (t)	$
(v) Yard portion	Line (h) plus line (r)	$

Part IV. Treatment where carrier has no regularly assigned locomotives in yard service

(w) Ratio of yard switching loco. miles to total loco miles in freight service	A.R.Sch.531, col.(b), item 25 divided by item 26	ratio
(x) Locomotive depreciation, steam and other locomotives, freight service	A.R.Sch.320, col.(e), lines 132 and 133	$
(y) Yd. port. of loco. depr. steam and other, freight	Line (w) x line (x)	$
(z) Rd. port. of loco. depr. steam and other, freight	Line (x) minus line (y)	$

Part V. Freight-train car depreciation

Assign 45% to the mileage portion, col.(8), and 55% to time portion, col.(9).

* It is assumed that the distribution of the yard locomotive-miles between freight and passenger is the same for steam locomotives as other locomotives. Separate mileage for (1) steam locomotives and (2) other locomotives, in freight versus passenger service, is not available.

3/ For the purpose of territorial aggregations, assign 100% to column (9). (Note: Where supplemental studies are to be made by individual carriers, assign as follows: If a debit balance, 100% to column (9); if a credit balance, apportion ____ % of such amount between columns (8) and (9) on basis of lines 3, 8, and 10, columns (8) and (9). Show remainder in column (4) for purpose of reconciliation. Such remainder must be deducted from the allowances for return on carrier's valuation when such valuation includes all freight car equipment owned. See Schedule . This procedure to be followed only upon special instructions).

4/ Ratio from Schedule E, sheet 2, line 28, column (14).

5/ Where the separation of locomotive expense, running, by territories is made on the basis of lines 23 and 24, the expenses equal column (17) multiplied by columns (18), (20), or (22), as applicable. Where the separation is provided by the carriers, see Schedule A, sheet 1, lines 13 to 36. Where the separation of locomotive expense, yard, by territories is made on the basis of line 19, the expenses equal column (17) multiplied by columns (18), (20), or (22), as applicable.

6/ Thousands.

7/ Column (3), line 8, divided by line 6.

8/ Adjust totals for passenger portion of nonrevenue freight by multiplying by ratio shown in footnote 4. The aggregate of the adjusted territorial totals should equal the amount shown in line 18, column (6) (for yard locomotives) and column (5) for road locomotives.

9/ Leave blank.

10/ Insert system and territorial (if any) expenses direct from Schedule A, sheet 3, line 31. Leave columns (16), (18), (20), and (22) blank.

11/ Insert system and territorial (if any) expenses direct from Schedule A, sheet 3, line 32. Leave columns (16), (18), (20), and (22) blank.

12/ Insert system and territorial (if any) expenses direct from Schedule A, sheet 3, line 29. Leave columns (16), (18), (20), and (22) blank.

13/ Where a carrier shows no expenses for yard locomotives, separate the expenses for road locomotives between train switching and running on the basis of the locomotive-miles in each service. Compute as follows:

Item	Source	Amount
(a) Train switching portion of mileage	Column 16, line 204 (column 16, line 20 + line 23)	Ratio
(b) Train switching expenses	Column 5, line 18 x line (a)	
(c) Road - running portion of expenses	Column 5, line 18 minus line (b)	

Territory or system

Railway

Schedule A
Sheet 3 of 3

Separation of System Freight-train Car Expenses between Running, Switching and Loading and Unloading 1/

Separation of Statistics

Line No.	Item	Number of cars: Source	Number of cars: Aggregate	Car-miles: Normal movement (miles)	Car-miles: Total car-miles (Col.(3) times col.(4))	System car days in running, switching and loading and unloading: Running service	Switching service: Approx. car days per car 2/	Switching service: Total car days (Col. (3) x col.(7))	Loading & unloading: Approx. car days per car 2/	Loading & unloading: Total car days (Col.(3) x col.(9))	Total car-days (Cols. (6) + (8) + (10))	Line No.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
						Running Service						
1	Total freight cars, loaded & empty, incl. cabs.	xxx	xxx	xxx	3/	4/ xxx	xxx	xxx	xxx	xxx		1
						Switching Service and Loading and Unloading						
2	Carrier term.switch., indus. & team trks (loads)	5/				xxx						2
3	Carrier term.switch., indus. & team trks (empties)	6/				xxx			xxx	xxx		3
4	Carrier term.switching, freighthouse trks (loads)	7/				xxx						4
5	Carrier term.switch. freighthouse trks (empties).	6/				xxx			xxx	xxx		5
6	Connection term. switch.(cars originated or terminated by respondent & receiving connecting line road haul) (loads)	5/				xxx						6
7	Connection term. switch.(cars originated or terminated by respondent and receiving connecting line road haul) (empties)	6/				xxx			xxx	xxx		7
8	Interchange switching (loads)	8/				xxx			xxx	xxx		8
9	Interchange switching (empties)	9/				xxx			xxx	xxx		9
10	Intermediate switching (loads)	18/				xxx			xxx	xxx		10
11	Intermediate switching (empties)	9/				xxx			xxx	xxx		11
12	Intraterminal switching (loads)	10/				xxx						12
13	Intraterminal switching (empties)	6/				xxx			xxx	xxx		13
14	Interterminal switching (loads)	11/				xxx						14
15	Interterminal switching (empties)	6/				xxx			xxx	xxx		15
16	Intertrain & intratrain switching (loads)	12/				xxx			xxx	xxx		16
17	Intertrain & intratrain switching (empties)	9/				xxx			xxx	xxx		17
18	Carrier terminal switching, nonrevenue (loads)	19/ (d)				xxx						18
19	Carrier terminal switching, nonrevenue (empties).	19/ (e)				xxx						19
20	Subtotal (lines 2-19, inclusive)	xxx	xxx	xxx		xxx	xxx		xxx			20
21	Total equated car-miles in switching (line 20 x 2.00) 13/	xxx	xxx	xxx		xxx	xxx	xxx	xxx	xxx	xxx	21
						Totals - Running, Switching & Loading & Unloading						
22	Total equated car-miles (line 1 plus line 21)	xxx	xxx	xxx		xxx	xxx	xxx	xxx	xxx	xxx	22
23	Total car-days (line 1 plus line 20)	xxx	xxx	xxx	xxx		xxx		xxx			23

Separation of Expenses

Line No.	Item	System: Equated units: Amount	System: Equated units: Percent of sys.tot. 15/	System: Freight train car expenses 16/	Terr.: Equated units: Amount	Terr.: Equated units: Percent of sys.tot. 15/	Terr.: Freight train car expenses 16/	Terr.: Equated units: Amount	Terr.: Equated units: Percent of sys.tot. 15/	Terr.: Freight train car expenses 16/	Terr.: Equated units: Amount	Terr.: Equated units: Percent of sys.tot. 15/	Terr.: Freight train car expenses 16/	Line No.
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	
	Mileage portion	Car miles 14/			Car miles 14/			Car miles 14/			Car miles 14/			
24	Running		$			$			$			$		24
25	Switching		$			$			$			$		25
26	Total		100%			$			$			$		26
	Time portion	Car days 17/			Car days 17/			Car days 17/			Car days 17/			
27	Running		$			$			$			$		27
28	Switching		$			$			$			$		28
29	Loading and unloading		$			$			$			$		29
30	Total		100%			$			$			$		30
	Total - Mileage + time portion													
31	Running (line 24 plus line 27)	xxx	xxx		xxx	xxx		xxx	xxx		xxx	xxx		31
32	Switching (line 25 + 28)	xxx	xxx		xxx	xxx		xxx	xxx		xxx	xxx		32
33	Grand total (lines 29, 31 and 32)	xxx	xxx		xxx	xxx		xxx	xxx		xxx	xxx		33

(See reverse side for footnotes)

Footnotes for Schedule A, sheet 3

1/ Where the separation of respondent's freight-train car expenses is made on a system basis use only one sheet of this schedule, filling out lines 1 to 33 with columns (16) to (24) being left blank. Where the separation of respondent's freight-train car expenses is required on a territorial basis use a separate sheet for each territory. The total car-miles and car-days for all territories shall be aggregated and the expenses distributed on lines 24 to 33, columns (12) to (24), using for this purpose the first of the territorial pages, leaving such portion of the remaining territorial pages blank.

2/ Show the approximate car-days per car for each class of switching for which the number of cars are shown in column (3). Such estimates should reflect system averages, the data to be estimated on the basis of car records, per diem reclaims, demurrage records and available switching studies. Unless otherwise instructed, assume the following:

Class of switching	Switching service	Loading and unloading
(a) Carrier term. switch., indus. and team tracks		
(b) Carrier term. switching, freight-house tracks		
(c) Interchange switching		
(d) Other (designate)		
(e) Other (designate)		

3/ From Annual Report, Schedule 531, column (d), sum of items 40, 41, and 42.

4/ Compute car days - running service as follows:

Item	Amount
(a) Train hrs. incl. train-switch. hours at way stations (A.R. Sch. 531, item 44, col.(b))	
(b) Avg. cars per train (A.R.Sch.531, (items 40 and 41, col.(b)) ÷ (items 15, col.(b))	
(c) Freight train cars, hrs. - running (line (a) x line (b))	
(d) Freight train car days - running (line (c) ÷ 24 hours)	
(e) Caboose car days (train hours, line (a) ÷ 24)	
(f) Total car days, incl. caboose (line (d) plus line (e))	

For purposes of territorial breakdown, distribute between territories on the basis of the total car-miles, loaded and empty, including cabooses, shown on Schedule A, sheet 1, line 8, columns (4) to (7).

5/ Compute total loads from A.R. Sch. 541, Class 850, sum of columns (d) and (f) plus twice column (b). If information available, exclude respondent's cars upon which origin or destination switching is performed by connecting line. In such case show on lines 6 and 7 the cars for which origin or destination switching is performed for a connecting line. For purposes of compiling territorial aggregates, this adjustment may be ignored.

6/ The number of empties equals the number of loads times the ratio of the total empties spotted and switched out to the total loads spotted and switched out as developed from available test studies. (Show ratios used: Line 3 _____ ; line 5 _____ ; line 7 _____ ; line 13 _____ ; line 15 _____).

7/ If not readily available, compute as follows:

Item	Source	Amount
(a) Total tons of l.c.l. traffic handled	A.R.Sch.541, Class 710, sum of cols. (e) + (g) + twice col. (c)	tons
(b) Average load, tons per loaded car	From Senate Resolution 146, 76th Congress, First Session, Vol.1, Statement 6, col.(14)	tons
(c) Number of loaded cars	Line (a) divided by line (b)	cars
(d) Number of loaded cars originated or terminated, re transfers	Tons transferred (from Sch.D, sh.1, 6/ line (g), col.(3)) + avg.load, line(b)	cars
(e) Total cars	Line (c) plus line (d)	cars

Note: If information available, exclude respondent's cars upon which origin or destination switching performed by connecting line. In such case show on lines 6 and 7 the cars for which origin or destination switching is performed by connecting line. For purposes of compiling territorial aggregates this adjustment may be ignored.

8/ Compute as follows:

Item	Source	Amount
(a) Number of cars, carload traffic	A.R.Sch.541, Class 850, sum of cols. (d) + (f) + twice col.(h)	c.l.
Number of cars, l.c.l. traffic:		
(b) Number tons rec. from and deliv. to conn.	A.R.Sch.541, Class 710, cols.(e) + (g) + twice col. (i)	tons
(c) Percentage of tons (interline traffic) in thru cars not worked at interchg.	Senate Resolution 146, State. 6, cols. (3) ÷ (2)	ratio
(d) Number of tons (interline) in thru cars not worked at interchange points	Line (b) x line (c)	tons
(e) Average tons for thru car, interline	Senate Resolution 146, State. 6, col. (13)	tons
(f) Number of cars not worked at interchange	Line (d) divided by line (e)	cars
(g) Total cars, c.l. and l.c.l.	Line (a) plus line (f)	cars

9/ The number of empties equals the number of loads multiplied by the system ratio of empty car-miles to loaded car-miles. A.R. Sch. 531, col. (d), item 41 divided by item 40 _____ ratio.

10/ Insert, if available, from data furnished by respondent. Give single count for each car handled covering switching at both origin and destination industries. Increase estimates of car-days and car-miles accordingly.

11/ Insert, if available, from data furnished by respondent.

12/ To be computed from an analysis of the number of intertrain and intratrain switching movements received by the average car for the average length haul. For purposes herein, compute the number of handlings, loads, by dividing the loaded car-miles in A.R. Sch. 531, col. (d), item 40 by 150. (This treatment assumes that there is one handling for every 150 car-miles).

13/ The factor of 2.0 is used to give weight to the conclusion that a car handled one mile in switching service is subject to 2.0 times as much wear as a car handled one mile in running service. Weighting based on studies made by Engineering Section of Bureau of Valuation.

14/ Car-miles, running, from line 1, column (5). Car-miles, switching, from line 21, column (5).

15/ Show percentage relationship that the car-miles bear to the total system equated car-miles in line 26, column (13). Compute the corresponding relationship for the car-days to the system total car-days shown on line 30, column (13).

16/ Insert the mileage portion of freight-train car expenses in line 26, column (15) and the time portion in line 30, column (15) from Sch. A, sheet 2, line 18, columns (8) and (9), respectively. Distribute the mileage portion of the system freight-train car expenses shown on line 26, column (15) on the basis of the percentage distribution of the car-miles in columns (14), (17), (20), and (23). Similarly, distribute the time portion of the freight-train car expenses shown on line 30, column (15) on the basis of the percentage distribution of the car-days.

17/ Insert in lines 27, 28, and 29 the car-days from line 23, columns (6), (8), and (10), respectively.

18/ Insert, if available, from data furnished by respondent. Give single count for each car handled covering switching at point of receipt and point of delivery. Increase estimates of car-days and car-miles accordingly.

19/ The entries in columns (4), (7), and (9), line 18, are the same as in line 2, columns (4), (7), and (9), respectively. The entries in columns (4), (7), and (9), line 19, will be the same as the entries in line 3, columns (4), (7), and (9), respectively. Compute count of cars as follows:

Item	Source	Amount
(a) Tons of nonrevenue freight carried	A.R.Sch. 531, item 80	
(b) Average net load of company material	Sch.R. sheet 2, line 5, col.(3) ÷ col.(5)	
(c) Total number of loaded cars handled, nonrevenue freight	Line (a) ÷ line (b)	
(d) Count of cars, nonrevenue, loads	Line (c) x 2	
(e) Count of cars, nonrevenue, empties	Line (c) x 2	

Where the carrier's expenses and statistics are broken down by territories, distribute the system entries in Schedule A, sheet 3, column (3), lines 18 and 19, on the basis of the entries in column (3), lines 2 and 3.

System Freight Maintenance of Way Expenses for 1939 Separated between Territories and Special Services

Line No.	Acct. No. (1)	Expense groups (2)	System freight expenses from Annual Report (3)	Apportionment factors 1/ (4)	(Territory) (5)	(Territory) (6)	(Territory) (7)	(Territory) (8)	Special services (system) (9)	Line No.
		Maintenance of Way and Structures								
1	201	Superintendence		Direct					2/	1
2	202-22	Track expense-yard switching tracks		Direct					xxx	2
3		-way switching tracks		Direct					xxx	3
4		-running tracks		Direct					xxx	4
5	227-28	Station and office buildings		Direct					xxx	5
6	229-30	Roadway buildings		Direct					xxx	6
7	231-34	Water and fuel stations		Direct					xxx	7
8	235-36	Shops and enginehouses		Direct					xxx	8
9	237-38	Grain elevators		Direct	xxx	xxx	xxx	xxx		9
10	239-40	Storage warehouses		Direct	xxx	xxx	xxx	xxx		10
11	241-42	Wharves and docks		Direct					xxx	11
12	243-44	Coal and ore wharves		Direct					xxx	12
13	247-48	Telegraph and telephone lines		Direct					xxx	13
14	249-50	Signals and interlockers		Direct					xxx	14
15	253-54	Power plants		Direct					xxx	15
16	257-58	Power-transmission systems		Direct					xxx	16
17	265-66	Miscellaneous structures		Direct					xxx	17
18	269-73	Roadway machines, etc.		Direct 3/					xxx	18
19	274-75	Injuries to persons and insurance		Direct					2/	19
20	276-77	Stationery and other expenses		Direct					2/	20
21	278	Maintenance joint tracks, yards, etc. - Dr.		Direct					xxx	21
22	279	Maintenance joint tracks, yards, etc. - Cr.		Direct					xxx	22
23	281	Right-of-way expense		Direct					xxx	23
24		Total (lines 1 to 23)								24
25		Maintenance of work equipment	Sch. A, sheet 2, col. (10) line 17	Line 24, cols. (5) to (8), inclusive						25
26		4/								26
27		4/								27

1/ Expenses which can not be directly assigned shall be apportioned between columns (5) to (9) on basis of the directly assigned charges in accounts 202-73, inclusive.
2/ Insert in column (9) that portion of accounts 201, 274-75, 276-77, which were directly assigned or apportioned to grain elevators and storage warehouses.
3/ Expenses which can not be directly assigned shall be apportioned to the territories on the basis of accounts 202-22, inclusive.
4/ Carriers to leave blank.

Territorial Freight Maintenance of Way and Structures Expenses for 1939 Separated between Running, Switching, Station Services, General Overhead & Special Services

_____ Territory

_____ Railway

Schedule B

Sheet 2 of 2

Line No.	Acct. No. (1)	Expense groups (2)	Territorial expenses (3)	Apportionment factors - (4)	Running service (5)	Switching service: Train (6)	Switching service: Yard (7)	Station service (8)	General overhead & special services (9)	Line No.
		Maintenance of Way and Structures								
1	202-22,	Track expense - yard switching tracks		Direct	xxx	xxx		xxx	xxx	1
2		- way switching tracks		Direct	xxx		xxx	xxx	xxx	2
3		- running tracks		Direct		xxx	xxx	xxx	xxx	3
4		Total (lines 1 to 3)						xxx	xxx	4
5		Percentage distribution, line 4	100%					xxx	xxx	5
6	227-28	Station and office buildings		15% Run., 85% Sta.		xxx	xxx		xxx	6
7	231-34	Water and fuel stations		1/				xxx	xxx	7
8	235-36	Shops and enginehouses 8/		Loco.-miles 2/				xxx	xxx	8
9	237-38	Grain elevators		Direct	xxx	xxx	xxx	xxx		9
10	239-40	Storage warehouses		Direct	xxx	xxx	xxx	xxx		10
11	241-42	Wharves and docks		Direct	xxx	xxx		xxx	xxx	11
12	243-44	Coal and ore wharves		Direct	xxx	xxx		xxx	xxx	12
13	249-50	Signals and interlockers		Direct		xxx	xxx	xxx	xxx	13
14	253-54	Power plants		3/				xxx		14
15	257-58	Power-transmission systems		4/				xxx		15
16		Total (line 4 plus lines 6 to 15, inclusive)		-						16
17	247-248, 265-266	Telephone & telegraph lines, miscellaneous structures		Direct	xxx	xxx	xxx	xxx		17
18		Total (line 16 plus line 17)		-						18
19		Percentage distribution of line 18	100%							19
20	229-30, 269-273, 278-79, 281	Roadway buildings, machines, tools, removing snow, etc., public improvements, joint facilities and right-of-way expenses		Line 5						20
21	201, 274-77	Superintendence, injuries, insurance, stationery, and other expenses		Line 19						21
22		Maintenance of work equipment 5/		Line 19						22
23		Total (line 16 plus lines 20-22)		-						23
24		Total less passenger proportion of non-revenue freight (line 23 x ____ ratio 6/)		-						24
25		Total for reconciliation purposes (line 17 plus line 24)	7/	-						25

1/ Separate between road and yard on basis of accounts 382 and 394. Separate road portion between running and train switching on the basis of account 394. Compute as follows the apportionment factor to be applied to amount shown above in column (3):

Line No.	Acct. No.	Item	Total	Running	Switching: Train	Switching: Yard
(1)	382	(A.R. Sch. 320, p.308, l. 173, col. (e))		xxx	xxx	
(2)	394	(Sch. C, sheet 2, line 9) *				xxx
(3)		Total				
(4)		Percentage distribution of line (3)	%	%	%	%

* Line (2), account 394 - Take total from Annual Report, Schedule 320, line 185, col. (e). Compute train switching portion by obtaining proportion of account 394 to accounts 394-97, Schedule C, sheet 2, line 9, and multiplying this percentage by the train switching amount, line 9, Schedule C, sheet 2, column (6). Obtain running portion by deducting train switching portion from total

2/ See locomotive-miles, Schedule A, sheet 2, column (16), as follows: Running - line 23, train switching - line 20, yard switching - line 19. For territorial locomotive mileage see columns (18), (20) and (22).

3/ Separate between road and yard on the basis of accounts 383 and 395. Separate road portion between running and train switching on the basis of account 395. Compute ratio to be applied to amount in column (3) as follows: (If no charges to these accounts, assign entire amount to column (9)).

Line No.	Acct. No.	Item	Total	Running	Switching: Train	Switching: Yard
(1)	383	(A.R. Sch. 320, p.308, l.174, col.(e))		xxx	xxx	
(2)	395	(Sch. C, sheet 2, line 9)*				xxx
(3)		Total				
(4)		Percentage distribution of line (3)	%	%	%	

* Line (2), account 395 - Take total from Annual Report, Schedule 320, line 186, column (e). Compute train switching portion by obtaining proportion of account 395 to accounts 394-97, Schedule C, sheet 2, line 9, and multiplying by the train switching amount, line 9, Schedule C, sheet 2, column (6). Obtain running portion by deducting train switching portion from total.

4/ Separate between road and yard on basis of accounts 383, 384 and 395, 396. Separate road portion between running and train switching on basis of accounts 395 and 396 from Schedule C, sheet 2, lines 10 and 11, respectively. Compute ratio to be applied to amount in column (3) as follows: (If no charges to these accounts, assign entire amount to column (9)).

Line No.	Acct. No.	Item	Total	Running	Switching: Train	Switching: Yard
(1)	383	(A.R. Sch.320, p.308, l. 174, col. (e))		xxx	xxx	
(2)	384	(A.R. Sch.320, p.310, l. 177, col. (e))		xxx	xxx	
(3)	395	(Sch. C, sheet 2, line 10)				xxx
(4)	396	(Sch. C, sheet 2, line 11)				xxx
(5)		Total				
(6)		Percentage distribution of line (5)	%	%	%	%

* Amounts under accounts 383 and 384 to be secured directly from Annual Report, Schedule 320, lines 174 and 177, column (e), respectively. Account 395 to be apportioned between running and train switching as per footnote 3. Account 396 to be apportioned between running and train switching by obtaining the proportion of account 396 to accounts 394-97, Schedule C, sheet 2, line 9, and multiplying this percentage by the amount in line 9, Schedule C, sheet 2, column (6). Running portion is obtained by deducting train switching portion from total.

5/ From Schedule A, sheet 2, line 17, column (10).

6/ Ratio from Schedule E, sheet 2, line 28, column (14).

7/ For carrier operations within one territory this total should agree with A.R. Schedule 320, page 307, line 114, column (e) plus maintenance of work equipment from Schedule A, sheet 2, line 17, column (10). If expenses separated by territories, total should equal that shown for the respective territories on Schedule B, sheet 1, line 28.

8/ Charges to accounts 245-46, gas producing plants, included with accounts 235-36.

Railway
Schedule C

System Freight Transportation Expenses for 1939 Separated between Territories

Line No.	Acct. No.	Expense groups	System freight expenses from Annual Report	Apportionment factors 1/	(Territory)	(Territory)	(Territory)	(Territory)	Special services (system)	Line No.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1	371	Superintendence		Direct					xxx	1
2	372	Dispatching trains		Direct					xxx	2
	373	Station employees:								
3		(a) Platform labor		Direct					xxx	3
4		(b) Other employees		Direct					xxx	4
5	374	Weighing, inspection, and demurrage bureaus		Direct					xxx	5
6	375	Coal and ore wharves		Direct					xxx	6
7	376	Station supplies and expenses		Direct					xxx	7
8	377	Yardmasters and yard clerks		Direct					xxx	8
9	378	Yard conductors and brakemen		Direct					xxx	9
10	379	Yard switch and signal tenders		Direct					xxx	10
11	380	Yard enginemen		Direct					xxx	11
12	381	Yard motormen		Direct					xxx	12
13	382	Yard switching fuel		Direct					xxx	13
14	383	Yard switching power produced		Direct					xxx	14
15	384	Yard switching power purchased		Direct					xxx	15
16	385	Water for yard locomotives		Direct					xxx	16
17	386	Lubricants for yard locomotives		Direct					xxx	17
18	387	Other supplies for yard locomotives		Direct					xxx	18
19	388	Enginehouse expenses - Yard		Direct					xxx	19
20	389	Yard supplies and expenses		Direct					xxx	20
21	390	Operating joint yards, terminals - Dr.		Direct					xxx	21
22	391	Operating joint yards, terminals - Cr.		Direct					xxx	22
23	392	Train enginemen		Direct					xxx	23
24	393	Train motormen		Direct					xxx	24
25	394	Train fuel		Direct					xxx	25
26	395	Train power produced		Direct					xxx	26
27	396	Train power purchased		Direct					xxx	27
28	397	Water for train locomotives		Direct					xxx	28
29	398	Lubricants for train locomotives		Direct					xxx	29
30	399	Other supplies for train locomotives		Direct					xxx	30
31	400	Enginehouse expenses - Train		Direct					xxx	31
32	401	Trainmen		Direct					xxx	32
33	402	Train supplies and expenses		Direct					xxx	33
34	404	Signal and interlocker operation		Direct					xxx	34
35	405	Crossing protection		Direct					xxx	35
36	406	Drawbridge operation		Direct					xxx	36
37	407	Telegraph and telephone operation		Direct					xxx	37
	408	Operating floating equipment:								
38		(a) In line-haul service		Direct					xxx	38
39		(b) In terminal operations		Direct					xxx	39
40	410	Stationery and printing		Direct					xxx	40
41	411	Other expenses		Direct					xxx	41
42	412	Operating joint tracks and facilities - Dr.		Direct					xxx	42
43	413	Operating joint tracks and facilities - Cr.		Direct					xxx	43
44	414	Insurance		Direct					xxx	44
45	415	Clearing wrecks		Direct					xxx	45
46	416	Damage to property		Direct					xxx	46
47	417	Damage to livestock on right-of-way		Direct					xxx	47
48	418	Loss and damage - freight		Direct	xxx	xxx	xxx	xxx		48
49	420	Injuries to persons		Direct					xxx	49
50		Total (lines 1-49)		--						50

1/ Expenses which can not be directly assigned shall be apportioned between columns (5) to (9) on basis of the directly assigned charges in accounts 372-408, inclusive, (excluding accounts 390-391).

Territorial Freight Transportation Expenses for 1939 Separated between Services

_____ Territory
_____ Railway
Schedule 8
Sheet 2 of 2

Line No.	Acct. No. (1)	Expense group (2)	Territorial expenses (3)	Apportionment factors (4)	Running service (5)	Switching service: Train (6)	Switching service: Yard (7)	Station service (8)	General overhead & special services (9)	Line No.
1	372	Transportation - Rail Line Dispatching trains		Direct		xxx	xxx	xxx	xxx	1
2	373	Station employees: (a) Platform labor 1/		Direct	xxx	xxx	xxx		xxx	2
3		(b) Other employees 1/		15% running, 85% sta.		xxx	xxx		xxx	3
4	375	Coal and ore wharves		Direct	xxx	xxx		xxx	xxx	4
5	376	Station supplies and expenses		Acct. 373 (a) & (b)	x	xxx	xxx		xxx	5
6	377-391	Yard expenses		Direct	xxx	xxx		xxx	xxx	6
7	392	Train enginemen		2/			xxx	xxx	xxx	7
8	393	Train motormen		2/			xxx	xxx	xxx	8
9	394-397	Train fuel, power, and water		2/			xxx	xxx	xxx	9
10	398	Lubricants for train locomotives		2/			xxx	xxx	xxx	10
11	399	Other supplies for train locomotives		2/			xxx	xxx	xxx	11
12	400	Enginehouse expenses - Train		2/			xxx	xxx	xxx	12
13	401	Trainmen		4/			xxx	xxx	xxx	13
14	402	Train supplies and expenses		Direct		xxx	xxx	xxx	xxx	14
15	404-406	Signals, interlockers, cross. & drawbridge opr.		Direct		xxx	xxx	xxx	xxx	15
16	408	Operating floating equipment		Direct 5/		xxx		xxx	xxx	16
17	412-413	Operating joint tracks & facilities (net)		Direct 5/		xxx	xxx	xxx	xxx	17
18	415-417	Clearing wrecks, damage to property, damage to livestock on right-of-way		Direct		xxx	xxx	xxx	xxx	18
19		Subtotal, lines 1 to 18		-						19
20	374,407	Weighing, inspection, etc.; tel. & tel.		-	xxx	xxx	xxx	xxx		20
21		Total, lines 19 and 20								21
22		Percentage distribution of line 21	100%	-	%	%	%	%	%	22
23	371, 410-411 414,420	Superintendence, stationery, insurance, injuries, etc.		Line 22						23
24		[illegible]l, line 19 + line 23								24
25		[illegible]l, less passenger proportion of non-[illegible]ems freight (line 24 x ____ ratio) 1/		-					xxx	25
26	418	Loss and damage--Freight		Direct	xxx	xxx	xxx	xxx		26
27		Total for reconciliation (lines 21, 23, 26) 3/		-						27

1/ If no breakdown provided, charge to platform labor all station employees' compensation included in A.R., Sch. 561, pp. 522-23, division Nos. 88, 89, 90, 91, 92, and 94. Charge remainder of account 373 to "Other employees."

2/ Separate between running and train switching on the basis of the percent of the locomotive-miles in each service as follows: (From A.R., schedule 531, p. 508, column (b))

Item No.	Item	Locomotive-miles	Percent
21-23	Running - principal, helper and light locomotives		%
24	Train switching		%
	Total		%
25	Yard switching		xxx
26	Total (Reconciliation)		xxx

3/ Compute train-switching portion col. (6), on basis of average fuel, power, and water cost per yard switching locomotive-mile multiplied by the train switching miles as follows:

Line No.	Item (1)	Source (2)	Amount (3)
(1)	Sys. exp., yd., fuel, power, water.	A.R. Sch. 320, Accts. 382, 383, 384, 385 col. (e), or Terr.-data, Sch. C, sheet 1.	
(2)	Cost/yd. sw. loco.-mile	Line (1) + item 25, footnote 2/	
(3)	Train sw. portion	Line (2) x item 24, footnote 2/	

Note: Col. (3) minus train switching portion equals running portion.

4/ Separate between running and train switching on the basis of the percent that the ordinary and light train-miles on the one hand and the train switching miles on the other hand bear to the total. Compute percentages as follows: (From A.R. schedule 531, p. 508, column (b)).

Item No.	Item	Miles	Percent
11-12	Running, ordinary and light train-miles		%
24	Train switching		%
	Total		%

5/ Separation to be provided by carrier.

6/ On the territorial basis the net charges should approach zero. The net debits and credits assignable to train switching in such event are negligible for the purpose of this territorial study.

7/ See Schedule B, sheet 2, line 28, column (14).

8/ When system data is provided in this schedule, the total should agree with A.R. Schedule 320, line 215, column (e). Where a territorial breakdown of a carrier's expenses is made, the total shown on line 24, column 3, plus the amount shown on line 20, column (3), should equal the total shown in Schedule C, sheet 1, line 50, columns (5), (6), (7) or (8), respectively, depending upon the territory for which the expenses have been brought forward.

Computation of Territorial Unit Costs in Station Service

Station Expenses Separated between Carload and Less Carload

_____ Territory

_____ Railway

Schedule D

Sheet 1 of 1

Line No.	Account No. (1)	Expense groups (2)	Source (3)	Amount (4)	Apportionment factors (5)	Carload clerical cost (6)	Less carload: Clerical cost (7)	Less carload: Platform (8)	Line No.
1	373(a)	Station—platform labor	Sch. C, sheet 2, col. (8)		Direct	xxx	xxx		1
2	373(b)	Station—other employees	Sch. C, sheet 2, col. (8)		Test 1/			xxx	2
3		Subtotal	Lines 1-2, inclusive						3
4		Percentage distribution of line 3		%		%		%	4
5	376	Station supplies and expenses	Sch. C, sheet 2, col. (8)		See line 8	xxx	xxx	xxx	5
6	371, 410-11, 414, 420	Superintendence, etc.	Sch. C, sheet 2, col. (8)		See line 8	xxx	xxx	xxx	6
7		Maintenance of way and structures	Sch. B, sheet 2, line 23, col. (8)		See line 8	xxx	xxx	xxx	7
8		Subtotal	Lines 5-7, inclusive		Line 4				8
9		Total	Line 3 plus line 8						9
10		Total—Less passenger portion of nonrevenue freight	Line 9 x _____ ratio 2/						10
10a		Total increased for overhead and taxes	Line 10 x (1.0 + _____ ratio) Sch. E, sheet 1, line 16, col. (5)						10a

Computation of Unit Station Costs 3/

Line No.	Item (9)	Source (10)	Carload (clerical) (11)	L.C.L. (clerical) (12)	L.C.L. (platform) (13)	Line No.
	Clerical					
11	Consignments, carload and l.c.l.	4/, 5/			xxx	11
12	Cost per consignment, carload and l.c.l., respectively	Carload: Line 10a, col. (6) divided by line 11, col. (11) L.C.L.: Line 10a, col. (7) divided by line 11, col. (12)			xxx	12
	Platform					
13	L.C.L. tons handled at origin and at destination	5/	xxx	xxx		13
14	L.C.L. tons receiving a platform transfer	6/	xxx	xxx		14
15	Total l.c.l. tons originated, terminated and transferred	Line 13 plus line 14	xxx	xxx		15
16	Platform cost per ton	Line 10a, col. (8) divided by line 15	xxx	xxx		16
17	Aggregate platform cost for tons originated and terminated	Line 13 x line 16	xxx	xxx		17
18	Aggregate platform cost for tons transferred (assignable as line-haul cost)	Line 14 x line 16	xxx	xxx		18

1/ Compute apportionment factors as follows: (Assign weight of 5.0 to carload consignments and the weight of 1.0 to l.c.l. consignments in column (3) of the following)

Line	Item (1)	Number of consignments (2)	Weighting (3)	Weighted consignments (cols. 2 x 3) (4)	Percentage distribution (5)
(a)	C.L. consignments (see line 11, col. (11))				%
(b)	L.C.L. consignments (see line 11, col. (12))				%
(c)	Total, lines (a) plus (b)				%

2/ Ratio from Schedule E, sheet 2, line 28, column (14).

3/ The unit cost developed herein must be multiplied by 2 to obtain the total cost for both origin and destination.

4/ Compute carload consignments by giving a separate count to each carload originated, to each carload terminated, and to each carload billed in switching service, the billing of which has not been previously included in the above. For system figures see A.R. Schedule 541, class 850, sum of columns (d) and (f) plus twice column (b). Add count of cars billed in switching service if furnished by carrier _____ carloads. For territorial data, see statement to be furnished by carriers.

5/ Compute l.c.l. consignments and tons as follows:

(a) L.C.L. tons originated and terminated (see A.R. Schedule 541, class 710, column (e), plus column (g) plus twice column (c), or territorial data furnished by carrier) _____ tons.

(b) Estimated average weight of l.c.l. shipments (see item 7 of statement I supplied by carriers). Convert to tons to two decimal places _____ tons.

(c) Total number of l.c.l. consignments (lines (a) divided by (b)) _____

6/ L.C.L. tons receiving a platform transfer to be developed from forwarder report (Senate Resolution 146, 76th Congress, first session, Vol. I, statement 6), as follows:

Line	Item (1)	Source (2)	Amount (3)
(a)	Tons originated—Test period	Forwarder report, statement 6, col. (1)	
(b)	Tons received—Test period	Forwarder report, statement 6, col. (2)	
(c)	Total—Test period	(a) plus (b)	
(d)	Tons actually transferred—Test period	Forwarder report, statement 6, col. (5)	
(e)	Ratio of tons actually transferred to originated and received—Test period	(d) divided by (c)	
(f)	Total tons originated and received—Annual period	A.R. Sch. 541, class 710, col. (k)*	
(g)	Total tons transferred—Annual period	(e) x (f)	

* For the purpose of line (f) (territorial application), see statement entitled "System Statistics for Carload and L.C.L. Traffic for 1939, Separated between Territories", furnished by the carrier in answer to a questionnaire dated November 19, 1940. For territorial data take one-half of the sum of items 3 and 4, columns (4)-(7), as applicable. (Note: The sum of items 3 and 4, column (3), representing the system aggregates, when divided by 2 should equal the system tons handled, as reported in A.R. Schedule 541, class 710, column (k)).

Computation of the Ratio of Traffic, General, Miscellaneous Overheads and Taxes to the Remaining Operating Expenses

Line No.	Expense groups (1)	Source of data (2)	System freight expenses (3)	Traffic, general and miscellaneous overheads & taxes (4)	Grand total (5)	Line No.
1	Maintenance of equipment and equipment rents	Schedule A, sheet 2, line 16, column (3)		xxx	xxx	1
2	General overhead - Tel. & tel. & miscellaneous structures, maintenance of way	Sch. B, sh. 2, line 17, col. (3)	xxx		xxx	2
3	General overhead - Tel. & tel. & miscellaneous structures; overhead from maintenance of way accounts	Line 2 x ___ ratio (Sch. B, sh. 2, col. (3), line 21 divided by line 16)	xxx		xxx	3
4	Maintenance of way & structures (total, excl. work equipment, tel. and tel., miscellaneous structures)	1/		xxx	xxx	4
5	General overhead - Weighing, inspection, tel. & tel. (from Transportation - Rail line)	Sch. C, sheet 2, line 20, column (3)	xxx		xxx	5
6	General overhead - Weighing, inspection, tel. & tel.: overhead from transportation account	Line 5 x ___ ratio (Sch. C, sheet 2, col. (3), line 23 divided by line 21)	xxx		xxx	6
7	Transportation expenses, excl. tel. & tel., etc., and loss and damage, freight	Sch. C, sh. 2, line 24, col. (3) minus line 6, col. (4) (above = ___. Multiply remainder by ratio frm. Sch. E, line 28, col. (14), sh. 2		xxx	xxx	7
8	General overhead - Loss and damage (excluding claim payments)	Sch. C, sh. 2, line 26, col. (3), minus total L. & D. payments furnished by carrier, State. I, item 6 (c.l. plus l.c.l.) 2/	xxx		xxx	8
9	Traffic	A. R. Sch. 320, line 160, col. (e)	xxx		xxx	9
10	Miscellaneous operations	A. R. Sch. 320, line 226, col. (e)		xxx	xxx	10
11	General	A. R. Sch. 320, line 245, col. (e)	xxx		xxx	11
12	Joint facility rents	A. R. Sch. 300I, net of accts. 506 & 541, col. (g)	xxx		xxx	12
13	Rent of bldgs. and other property	A. R. Sch. 310, acct. 142, col. (c) -Cr.	xxx	Cr.	xxx	13
14	Taxes, freight portion	A. R. Sch. 300I, line 6, col. (g)	xxx		xxx	14
14a	Transportation for investment -Cr.	A. R. Sch. 320, line 246, column (e)	xxx	Cr.	xxx	14a
15	Total	Lines 1 to 14a inclusive				15
16	Ratio (percent) of traffic, general and misc. overheads and taxes to other expenses	Line 15, column (4) divided by column (3)	xxx	xxx	%	16
	Total expenses for reconciliation purposes					
17	Total operating expenses, rents and taxes	Sch. 300I, (A.R.) lines 4, 6 and 24, column (g)	xxx	xxx		17
18						18
19	Rents of buildings	A. R. Sch. 310, line 36, column (c) -Cr.	xxx	xxx	Cr.	19
20	Subtract loss and damage - Claim payments	Furn. by carrier, Statement I, item 6 (c.l. plus l.c.l.)	xxx	xxx	Cr.	20
21	- Total (lines 17, 19 and 20) 3/		xxx	xxx		21

1/ Compute as follows:
(a) Total M. of W. expenses from Sch. B, sheet 2, col. (3), line 23 ** ..... $_____
(b) Subtract M. of work equipment, Sch. B, sheet 2, col. (3), line 22 ..... $_____
(c) Subtract overhead assigned to tel. & tel., etc., Sch. E, sheet 1, col. (4), line 3 $_____
(d) Total, excluding duplications and overhead (Subtract (b) plus (c) from (a)) .... $_____
(e) Total, less passenger portion of nonrevenue freight ((d) x _____ ratio*) ... $_____
* Ratio from Schedule E, sheet 2, line 28, column (14).
** Where a territorial breakdown of a carrier is provided on Schedule B, change line (a) to read as follows:
Total maintenance of way expenses from Schedule B, sheet 2, line 23, column (3) plus Schedule B, sheet 1, line 24, column (9).

2/ Where the carrier's costs are separated on a territorial basis, line 8, column (2) should read as follows:
Schedule C, sheet 1, line 48, column (9) minus total loss and damage claim payments furnished by carrier, Statement 1, item 6 (carload plus l.c.l.).

3/ The reconciliation of the distributed expenses, lines 1-15, with the total expenses from the Annual Report plus the statement of loss and damage claim payments furnished by carriers, columns (17)-(20), is made as follows:
(a) See column (3), sum of lines 1, 4 and 7 ..... $_____
(b) Line (a) + _____ ratio from Sch. E, sh. 2, line 28, col. (14)* _____
(c) Line 10, col. (3), plus line 15, column (4) ..... $_____
(d) Sum of lines (b) + (c). This amount should equal line 21, column (5) ..... $_____

Computation of Revenue Gross Ton-miles and the Revenue Freight Portion of the Total Freight Operating Expenses

Railway
Schedule E
Sheet 2 of 3

Line No.	Item (1)	Computation of gross ton-miles of nonrevenue freight and cabooses: Percent of nonrev. net ton-mi. by classes of equip. (Furn. by carrier from State. I, item 3) (2)	Net ton-miles of nonrevenue freight (Total line 5, col. (3) x percent in col. (2)) (3)	Average net load per car by classes of equip. (Comp. from A.R. Sch. 541 or QCS State. 1/) (4)	Loaded car-miles nonrevenue freight (Cols. (3) ÷ (4)) (5)	Avg. tare weight (Furn. by carrier, State. I item 5) (6)	Tare gross ton-miles loaded direction (Col. (5) x col. (6)) (7)	Ratio Empty to loaded miles (Furn. by car. State. I, item 5) (8)	Empty car-miles (Col. (5) x col. (8)) (9)	Tare gross ton-miles, empty return (Col. (7) x col. (8)) (10)	Total nonrevenue gross ton-miles (Cols. (3) + (7) + (10)) (11)	Line No.
					Computation of Nonrevenue Gross Ton-miles							
1	Box cars	%										1
2	Gondola & hopper cars	%										2
3	Tank cars	%										3
4	All other cars	%										4
5	Total, all cars	100%	2/	XXX		XXX		XXX				5
					Computation of Caboose Ton-miles							
6	Cab. GTM (From A.R.Sch. 531, line 48, col. (b)). Insert total in col. (9)	XXX	XXX	XXX	XXX		XXX	XXX		XXX	3/	6
					Total Gross Ton-miles, Nonrevenue Plus Caboose							
7	Total GTM for nonrev. frt., plus cab. (line 5 + line 6)	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		7

Computation of Revenue Gross Ton-miles, Revenue Car-miles, and Ratio of Revenue Freight Operating Expenses to Total Freight Operating Expenses

	Item (12)	Source (13)	System total (14)	Apportionment factor (15)	(Territory) (16)	(Territory) (17)	(Territory) (18)	(Territory) (19)	
			Computation of Revenue Gross Ton-miles						
8	GTM of frt. tr. cars, contents & cabs. in frt. trains 4/	A.R.Sch. 531, line 61, col.(b) or furnished by carrier, Sch. A, sheet 1, line 6		-					8
9	GTM of pass. train cars and contents in freight trains	A.R.Sch. 531, line 62, col. (b) or furnished by carrier, Sch. A, sheet 1, line 7		-					9
10	Total GTM of cars, contents & cabooses in freight trains	Line 8 plus line 9		-					10
11	Percentage distribution of total GTM by territories	-	100%	Line 10	%	%	%	%	11
12	Nonrevenue GTM	Line 5, column (11)		Line 11					12
13	Caboose GTM - System	Line 6, column (11) 4/		-	XXX	XXX	XXX	XXX	13
14	Total, nonrev. GTM, plus cab. GTM	Line 12 plus line 13		-					14
15	Revenue GTM, excl. nonrev. GTM and caboose GTM	Line 10 minus line 14		-					15
			Computation of Revenue Car-miles						
16	Total loaded & empty frt. car-miles, excluding cabooses	A.R.Sch. 531, lines 40 + 41, col.(d)		-					16
17	Car-miles, cars rented on a mileage basis, loaded and empty	Furn. by carrier, State, I, item 1		-					17
18	Car-miles, other than mileage cars, loaded & empty, excl. cabooses	Line 16 minus line 17 or furn. by carr. (terr.distr.) Sch.A, sh. 1, line 11		-					18
19	Nonrevenue car-miles	Line 5, col. (5) plus col. (9) 5/		Line 11					19
20	Revenue car-miles, other than mileage cars, loaded & empty, excl. cabs.	Line 18 minus line 19		-					20
	Computation of the Ratio of the Revenue Freight Portion of the Operating Expenses to the Total Freight Operating Expenses (i.e., Total Excluding Passenger Portion of Nonrevenue Freight Expenses)								
21	Total GTM, revenue + nonrev., excl.cab.	Col. (14), line 10 minus line 13		-	XXX	XXX	XXX	XXX	21
22	Ratio of nonrev. GTM to total GTM, excluding cabooses	Col. (14), line 12 divided by line 21		-	XXX	XXX	XXX	XXX	22
23	Ratio of rev. GTM to total GTM, rev. plus nonrev., excl. cabooses	Col. (14), line 15 divided by line 21		-	XXX	XXX	XXX	XXX	23
24	Freight operating expenses	A.R.Sch. 300I, p. 301, line 4, col. (g)		-	XXX	XXX	XXX	XXX	24
25	Total operating expenses	A.R.Sch. 300I, p. 300, line 4, col. (b)		-	XXX	XXX	XXX	XXX	25
26	Ratio of frt. oper. expenses to total operating expenses	Col. (14), line 24 divided by line 25		-	XXX	XXX	XXX	XXX	26
27	Frt. portion of nonrev. traffic ratio	Col. (14), line 22 x line 26		-	XXX	XXX	XXX	XXX	27
28	Revenue frt. portion of frt. oper. exp., expressed as ratio (i.e., total excl. passenger portion of nonrev. frt. traffic)	Col. (14), line 23 plus line 27		-	XXX	XXX	XXX	XXX	28

1/ To be computed as follows: Assign each commodity to the class of equipment in which it is commonly handled. Obtain a total of the carloads and tons carried for each class (see A.R. Sch. 541, cols. (j) and (k)). Divide the number of tons by the number of cars to obtain the tons per car for each class of equipment. (Work to be done on tabulating machines).

2/ Net ton-miles from A.R., Sch. 531, item 81, col. (d).

3/ Columns (6) x (9).

4/ Where the figures for GTM have been furnished by the carrier on Sch. A, sheet 1, lines 6 and 7, the figures are exclusive of caboose GTM. In such case leave line 13 blank.

5/ Exclude nonrevenue car-miles in private-line cars. Adjustment in this regard is made only on tank cars and then only when the percentage of nonrev. net ton-miles in tank cars constitutes more than 25% of tot. nonrev. net ton-miles.(see line 3, col. (2)). Tank car-miles engaged in hauling company materials to be obtained from carrier. Exclude private-line tank car mileage engaged in hauling company materials from total shown in column (14). _____ P.L. miles.

_____ Territory
_____ Railway
Schedule E
Sheet 3 of 3

Computation of L.C.L. and Passenger Deficiencies, with and without Returns, and the Ratio of such Deficiencies to Carload Operating Expenses, Rents and Taxes

Line No.	Item (1)	Source (2)	System data (3)	Territory (4)	Territory (5)	Territory (6)	Line No.
	Computation of l.c.l. station costs — L.C.L. Deficiencies						
1	Station clerical costs	Schedule D, line 10A, col. (7)	$	$	$	$	1
2	Platform costs	Schedule D, line 10A, col. (8)					2
3	Total station costs, clerical and platform	Line 1 plus line 2					3
	Computation of l.c.l. line-haul costs						
4	Total l.c.l. tons originated & received from connections	A. R. Sch. 541, Class 710, col. (k) 1/	tons				4
5	(Line left blank)						5
6	(Line left blank)						6
7	Average haul per ton originated & received from connections	Forwarder Report, Stat. 6, col. (15) 2/	miles				7
8	Net ton-miles	Line 4 x line 7	net t.m.				8
9	Average net ton-miles per loaded car-mile	Forwarder Report, Stat. 6, col. (15) 2/					9
10	Loaded car-miles	Line 8 divided by line 9	ld.c.m.				10
11	Tare ton-miles, loaded direction (box cars)	Line 10 x ____ tons (frm.Sch. E, sh. 2, col.(6), line 1)	t.m.				11
12	Empty tare ton-miles (box cars)	Line 11 x ____ ratio (frm.Sch. E, sh. 2, col.(8), line 1)	t.m.				12
13	Total, gross ton-miles (thousands)	(Line 8 plus line 11 plus line 12) divided by 1,000	1000 GTM				13
14	Cost per 1,000 revenue gross ton-miles	Schedule H, sheet 1, line 15 (times 1,000)	$	$	$	$	14
15	Line-haul costs treated on GTM basis	Line 13 x line 14					15
16	Total car-miles	Line 10 x (1.0 plus ____ ratio, frm.line 12, col. (2))	Tot. c.m.				16
17	Unit cost per car-mile	Schedule H, sheet 1, line 4 plus line 11	$	$	$	$	17
18	Line-haul costs treated on CM basis	Line 16 x line 17					18
19	Total line-haul costs	Line 15 plus line 18					19
	L.C.L. switching costs						
20	Aggregate costs - Freighthouse cars	Sch. H, sh. 1, lines 28 + 29 + 34 + 36					20
	Total l.c.l. costs, including operating expenses, rents & taxes						
21	Total, station, line-haul, and switching	Lines 3, 19, and 20					21
22	Payments to others for pick-up and delivery	A.R. Sch. 310, (see *footnote), sum of lines (a), (b) and (c), excluding carload payments, if any		XXX	XXX	XXX	22
23	Total l.c.l. operating expenses, rents, and taxes plus payments for pick-up and delivery service	Line 21 plus line 22		XXX	XXX	XXX	23
24	Carload operating expe., rents & taxes (total excl. l.c.l.)	5/					24
	Ratio of l.c.l. deficit (excluding & including return) to carload operating expenses, rents and taxes						
25	L.C.L. revenue	A. R. Sch. 541, Class 710, col. (1)		XXX	XXX	XXX	25
26	L.C.L. oper. income or deficit (indicate income (+) or def. (-))	Line 25 minus line 23	(+)or(-)	7/	7/	7/	26
27	Ratio of l.c.l. income or def. (after oper. exps., rents, taxes & pick-up & delivery payments) to carload oper.exps., rents & taxes	Line 26 divided by line 24		6/	6/	6/	27
28	Return on l.c.l. portion of valuation at ____ percent	Schedule F, line 3 x _____ ratio 3/	$(-)	$	$	$	28
29	Total l.c.l. income or deficit (after operating expenses and return at _____%)	Line 26 plus line 28, signs considered	(+)or(-)				29
30	Ratio of l.c.l. income or deficit (after oper. exps. and return at _____%) to carload operating expenses	Line 29 divided by line 24					30
	Passenger Deficiencies						
31	Passenger service net railway operating income or deficit (indicate income plus (+) or deficit (-))	A.R. Sch. 3001, line 25, col. (j)	(+)or(-)				31
32	Expenses for passenger portion of nonrevenue freight traffic	Freight oper. exps. x _____ ratio 4/	(-)				32
33	Total passenger operating income or deficit (indicate)	Line 31 plus line 32, signs considered	(+)or(-)	9/	9/	9/	33
34	Ratio of passenger operating income or deficit to carload operating expenses, rents and taxes (excluding l.c.l. expenses)	Line 33 divided by line 24		8/	8/	8/	34
35	Return on passenger portion of the valuation at _____%	Schedule F, line 5 x _____ ratio 3/	(-)				35
36	Total passenger income or deficit (after operating expenses & return at _____%)	Line 33 plus line 35, signs considered	(+)or(-)				36
37	Ratio of passenger operating income or deficit (after operating expenses and return at _____%) to carload operating expenses (excluding l.c.l.)	Line 36 divided by line 24					37

1/ If territorial seperation is made, data must be obtained from carriers.

2/ Senate Resolution 146, 76th Congress, First Session, Volume I, Statement 6, total pedler and other l.c.l. cars.

3/ Ratio to be determined by rate of return (i.e., ratio for 5-3/4% equals .0575).

4/ Maintenance of equipment, maintenance of way and transportation expenses, Sch. E, sheet 1, column (3), the sum of lines 1 plus 4 plus 7 divided by the ratio in Sch. E, sheet 1, footnote 1, line (e), totalling $_____ times _____ ratio (ratio equals 1.00 minus ratio from Sch. E, sheet 2, line 28, column (14)).

5/ Compute as follows:

	Item	Amount
(a)	Sch. E, sh. 1, line 15, col. (5)	$
(b)	Subtract exps. miscl. opers., Sch. E, sh. 1, line 10, col. (3)	
(c)	Subtract overhead assignable to miscl. opers. (line (b) above x ratio from Sch. E, sh. 1, line 16, col. (5))	
(d)	Subtract l.c.l. expe., station, line-haul & switching (from Sch. E, sh. 3, line 21, col. (3))	
(e)	Carload costs (freight serv. costs minus costs for miscl. opers. & l.c.l.) (line (a) minus lines (b), (c) and (d))	

(See reverse side for continuation of footnotes)

Footnotes for Schedule E, sheet 3 - Continued

5/ Continued

Supplement to Footnote 5 of Schedule E, Sheet 3, to Be Used for the Purpose of Computing Carload Operating Expenses, Rents, and Taxes Where Territorial Separations Are Made
(See line (g) below)

Line	Item (1)	Source (2)	Total all territories (3)	Territory	Territory	Territory	Territory	Line
(a)	Total freight expenses, c.l. and l.c.l., excluding car hire and overhead apportioned to such car hire	Schedule H, sheet 1, line 44, columns (4), (5), (6) or (7), as appropriate	$	$	$	$	$	(a)
(b)	Percentage distribution of car-miles, cars rented on mileage basis	Schedule A, sheet 1, line 9, columns (4), (5), (6), and (7), respectively, + column (3)						(b)
(c)	Distribution of hire of freight cars rented on a mileage basis .	Schedule A, sheet 2, line 11, column (3) ($_____) times ratio from line (b) above	$	$	$	$	$	(c)
(d)	Increase of the car hire for overhead and taxes	Line (c) times _____ ratio from schedule E, sheet 1, line 16, column (5)	$	$	$	$	$	(d)
(e)	Total freight service costs, c.l. and l.c.l.	Sum of lines (a), (c), and (d)	$	$	$	$	$	(e)
(f)	L.C.L. expense, station, line haul, and switching	Schedule H, sheet 3, line 21, columns (4), (5) or (6)	$	$	$	$	$	(f)
(g)	Carload costs (freight service costs minus cost for miscellaneous operations plus l.c.l.) (Carry forward to line 24)	Line (e) minus line (f)	$	$	$	$	$	(g)

6/ Insert the same figure as shown in line 27, column (3).
7/ Line 24 x ratio (percent) shown in line 27. If a deficit exists, indicate with a minus sign.

8/ Insert the same figure as shown in line 34, column (3).
9/ Line 24 x ratio (percent) shown in line 34. If a deficit exists, indicate with a minus sign.

Basis I for Treatment of Return on Valuation

Separation of the Total Rate-making Valuation between L.C.L. Freight Traffic, Carload Freight Traffic and Passenger Traffic, and the Computation of the Ratio of the Cost of Providing the Specified Returns to L.C.L. and Carload Operating Expenses, Rents and Taxes

_____ Territory
_____ Railway
Schedule F
Sheet 1 of 3

Line No.	Item (1)	Source (2)	System aggregate (3)	Territory (4)	Territory (5)	Territory (6)	Line No.
	Valuation of Carrier Property (Average as of January 1, 1939 and January 1, 1940)						
1	Tentative valuation of carrier property	1/					1
	Rate-making valuation of carrier property	Bureau of Valuation, I.C.C.					
	Separation of Valuation between L.C.L. Freight Service, Carload Freight Service, and Passenger Service on an Operating Expense Basis						
2	Freight portion of valuation	Line 1 x ____ ratio 2/					2
3	L.C.L. portion of freight service valuation	Line 2 x ____ ratio 3/					3
4	Carload portion of valuation	Line 2 minus line 3					4
5	Passenger portion of valuation	Line 1 x ____ ratio 4/					5
	L.C.L. and Carload Operating Expenses, Rents and Taxes						
6	Total freight oper. exps., rents & taxes, incl. l.c.l. & carload traffic and miscellaneous operations (excl. L. & D.)	Schedule E, sheet 1, line 15, col. (5)					6
7	L.C.L. oper. exps., rents & taxes (excl. L. & D. & pick-up & delivery)	Schedule E, sheet 3, line 21, col. (3)					7
8	Carload oper. exps., rents & taxes (excl. l.c.l., misc. opers. & L. & D.)	Schedule E, sheet 3, line 24, col. (3)					8
		Cost of Providing 5-3/4% Return on Valuation					
9	Cost of providing 5-3/4% return on l.c.l. portion of valuation	Line 3 x .0575					9
10	Ratio of cost of providing l.c.l. return to l.c.l. oper. exps., rents and taxes (excl. L. & D.)	Line 9 divided by line 7					10
11	Cost of providing 5-3/4% return on carload portion of valuation	Line 4 x .0575					11
12	Ratio of return on carload valuation to carload oper. exps., rents and taxes (excl. L. & D.)	Line 11 divided by line 8					12
13	Cost of providing return on the total frt. valuation, carload & l.c.l.	Line 2 x .0575					13
14	Ratio of total freight return, carload & l.c.l. to carload oper. exps., rents and taxes (excl. l.c.l. and L. & D.)	Line 13 divided by line 8					14
15	Cost of providing return on total valuation, freight & passenger	Lines (2 plus 5) x .0575					15
16	Ratio of the total return, freight & passenger, to carload oper. exps., rents and taxes (excl. l.c.l., misc. opers. and L. & D.)	Line 15 divided by line 8					16
		Cost of Providing 4% Return on Valuation					
17	Cost of providing 4% return on l.c.l. portion of valuation	Line 3 x .04					17
18	Ratio of cost of providing l.c.l. return to l.c.l. oper. exps., rents and taxes (excl. L. & D.)	Line 17 divided by line 7					18
19	Cost of providing 4% return on carload portion of valuation	Line 4 x .04					19
20	Ratio of return on carload valuation to carload oper. exps., rents and taxes (excl. L. & D.)	Line 19 divided by line 8					20
21	Cost of providing return on the total frt. valuation, carload & l.c.l.	Line 2 x .04					21
22	Ratio of total freight return, carload & l.c.l., to carload oper. exps., rents and taxes (excl. l.c.l. and L. & D.)	Line 21 divided by line 8					22
23	Cost of providing return on total valuation, freight and passenger	Lines (2 plus 5) x .04					23
24	Ratio of the total return, freight & passenger, to carload oper. exps., rents and taxes (excl. l.c.l., misc. opers. and L. & D.)	Line 23 divided by line 8					24
	Cost to the Carload Freight Traffic of Providing the System Current Rate of Return for the Year 1939						
25	Current return, all services, for year 1939, (indicate if income (+) or deficit (-))	A.R. Sch. 300I, line 25, col. (b)	(+) or (-)				25
26	Current rate of return, all services (show percent)	Line 25 divided by line 1, above, 5/					26
27	Current net railway operating income, carload traffic, 6/						27
28	Ratio of carload net railway oper. income to the total carload freight costs (excl. l.c.l., misc. opers. and L. & D.)	Line 27 divided by line 8					28

(See reverse side for footnotes)

Footnotes for Schedule F, sheet 1

1/ Docket 26712, Exhibit 1263, Cost of reproduction new less depreciation plus present value of land and rights brought down to December 31, 1939 on the basis of the changes shown in A.R. Sch.211E plus an allowance for working capital based on the ratio of the working capital to total value of property on January 1, 1937. The tentative valuation, if used, is to be replaced by the recommended rate-making valuation, furnished by the Bureau of Valuation, when such becomes available.

2/ Compute ratio as follows:

Item	Amount
(a) A.R.Sch. 320, col.(e), line 247 minus lines 160, 228, and 245	
(b) Carload and l.c.l. portion of frt. exps. (line (a) x ratio, Sch. E, sheet 2, line 28, col.(14)),(excl. passenger port. nonrev. exps.).	
(c) L.C.L. and carload overhead exps. (A.R.Sch.320, col.(e), sum of lines 160 and 245) (Assign 100% to freight for purposes herein) ..	
(d) Total carload & l.c.l. port. of frt. exps., excl. passenger portion of nonrevenue expenses (line (b) plus line (c))	
(e) Ratio of carload and l.c.l. oper. exps. to total expenses (line (d) divided by A.R. Sch. 320, col.(b), line 247)	(ratio)

3/ Compute ratio as follows: L.C.L. costs divided by total freight service costs, i.e., Sch. E, sheet 3, col. (3), line 21, divided by sum of lines 21 plus 24. _____ ratio.

4/ Compute ratio as follows:

Item	Amount
(a) A.R. Sch. 320, col. (b), line 247	
(b) Passenger port. of nonrevenue frt. oper. exps. (A.R.Sch. 320, col.(e), line 247 minus lines 160, 228, and 245, the remainder to be multiplied by (1.0 minus ratio, Sch.E, sheet 2, line 28, col.(14))	
(c) Total passenger exps., incl. passenger portion of nonrevenue freight (line (a) plus line (b))	
(d) Passenger portion of valuation (line (c) divided by A.R. Sch. 320, col. (b), line 247)	(ratio)

5/ Do not compute if there is a net railway operating deficit.

6/ The carload net railway operating income indicates that income which the carload traffic (freight) necessarily had to earn during 1939 if the carrier was to yield the return indicated on lines 25 and 26, after allowances for the passenger, less-carload, or other deficits (or income).

7/ I. Compute from Schedule E, sheet 3, the less-carload income (or deficit) before payments to others for pick-up and delivery service, as follows:
- (a) Where Schedule E, sheet 3, line 26, column (3), shows a deficit, and that amount is greater than that shown on line 22, obtain the less-carload deficit by subtracting the amount shown on line 22 from that shown on line 26.
- (b) Where the amount on line 26 reflects an income, obtain less-carload income by adding the amount shown on line 22 to that shown on line 26.
- (c) Where Schedule E, sheet 3, line 26, column (3), shows a deficit and that amount is less than that shown on line 22, obtain the less-carload income by subtracting the amount shown on line 26 from that shown on line 22.

II. Compute the carload traffic portion of the net railway operating income as follows:
- (a) Where the total freight railway operations show an income (A.R. Schedule 300I, line 25, column (g) _____) and the less-carload operations show a deficit, (I-(a) above), obtain by adding the less-carload deficit to the income shown in Schedule 300I. Insert result in column (3) and indicate (+).
- (b) Where the total freight railway operations show an income (A.R. Schedule 300I, line 25, column (g) _____) and the less-carload operations show an income (I-(b) or (c) above), obtain by subtracting the less-carload income from the income shown in Schedule 300I. Insert result in column (3) and indicate (+).
- (c) Where the total freight railway operations show a deficit (A.R. Schedule 300I, line 25, column (g) _____) and the less-carload operations show a deficit (I-(a) above), obtain by subtracting the less-carload deficit from the deficit shown in Schedule 300I. Insert result in column (3) and indicate (+) or (-) as applicable.
- (d) Where the total freight railway operations show a deficit (A.R. Schedule 300I, line 25, column (g) _____) and the less-carload operations show an income (I-(b) or (c) above), obtain by adding the less-carload income to the deficit shown in Schedule 300I. Insert result in column (3) and indicate (-).

Separation of the Value of the Road and Equipment by Territories and by Services, Freight and Passenger

_____ Railway
Schedule F
Sheet 2 of 3

Line No.	Item (1)	I (Territory) Total territorial expenses (from data by carrier) (2)	Special services and miscellaneous operations (3)	Total frt. portion (from data furnished by carrier) (4)	Total passenger portion (5)	II (Territory) Total territorial expenses (from data by carrier) (6)	Special services and miscellaneous operations (7)	Total frt. portion (from data furnished by carrier) (8)	Total passenger portion (9)	Line No.
1	Maintenance of way expenses	1/	2/	3/	4/	1/	2/	3/	4/	1
2	Transportation expenses	1/	xxx	5/	4/	1/	xxx	5/	4/	2
3	Subtotal (lines 1 and 2)									3
4	Adjustment for passenger portion of nonrevenue freight expenses 6/	xxx	xxx			xxx	xxx			4
5	Subtotal adjust. for psgr. port. nonrev. frt.									5
6	Traffic & general exps. - freight service 7/ ...		xxx		xxx		xxx		xxx	6
7	Traffic & general exps. - passenger service 8/ .		xxx	xxx			xxx	xxx		7
8	Total (sum of lines 5, 6 and 7)									8
9	Miscellaneous operations 9/			xxx	xxx			xxx	xxx	9
10	Total expenses by territories (excl. maint. of equip.) (sum of lines 8 and 9)									10
11	Percentage distribution of exps. by terrs. 10/ .	100%				100%				11
12	Distribution of terr. road value between misc., freight and passenger services 11/									12
13	Value of equipment by territories 12/		xxx				xxx			13
14	Total value road and equipment (sum of lines 12 and 13) 13/									14

Line No.	Item (10)	III (Territory) Total territorial expenses (from data by carrier) (11)	Special services and miscellaneous operations (12)	Total frt. portion (from data furnished by carrier) (13)	Total passenger portion (14)	IV (Territory) Total territorial expenses (from data by carrier) (15)	Special services and miscellaneous operations (16)	Total frt. portion (from data furnished by carrier) (17)	Total passenger portion (18)	Line No.
15	Maintenance of way expenses	1/	2/	3/	4/	1/	2/	3/	4/	15
16	Transportation expenses	1/	xxx	5/	4/	1/	xxx	5/	4/	16
17	Subtotal (lines 15 and 16)									17
18	Adjustment for passenger portion of nonrevenue freight expenses 6/	xxx	xxx			xxx	xxx			18
19	Subtotal adjust. for psgr. port. nonrev. frt.									19
20	Traffic & general exps. - freight service 7/ ...		xxx		xxx		xxx		xxx	20
21	Traffic & general exps. - passenger service 8/ .		xxx	xxx			xxx	xxx		21
22	Total (sum of lines 19, 20 and 21)									22
23	Miscellaneous operations 9/			xxx	xxx			xxx	xxx	23
24	Total expenses by territories (excl. maint. of equip.) (sum of lines 22 and 23)									24
25	Percentage distribution of exps. by terrs. 10/ .	100%				100%				25
26	Distribution of terr. road value between misc., freight and passenger services 11/									26
27	Value of equipment by territories 12/		xxx				xxx			27
28	Total value road and equipment (sum of lines 26 and 27) 13/									28

(See reverse side for footnotes)

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_____ Railway

Schedule F
Sheet 2 - Contd.

Footnotes for Schedule F, sheet 2

1/ Furnished by carriers in reply to letter of March 18, 1941.

2/ Distribute the special services shown in Schedule B, sheet 1, line 24, column (9), to territories on the basis of Sch. B, sheet 1, line 24, columns (5), (6), (7) or (8) as applicable. Insert territorial costs thus computed in Schedule F, sheet 2, line 1, columns (3) and (7) and Line 15, columns (12) and (16), as applicable.

3/ Schedule B, sheet 1, line 24, columns (5), (6), (7) or (8) as applicable.

4/ Compute by subtracting the sum of the special service and miscellaneous expenses and the freight expenses from the total expenses. For example, in Territory 1, subtract the sum of columns (3) and (4) from column (2).

5/ Compute transportation expenses for each territory as follows:

LINE	Item	Source	Terr. 1	Terr. 2	Terr. 3	Terr. 4	Total
(a)	Total transp. exps. excl. L. & D. ..	Sch. C, sh. 1, line 50, cols. (5,6,7, 8 resp.)					
(b)	Percentage distrib. of line (a)						
(c)	Distribution of L. & D., frt., by territories	Distribute amount from Sch. C, sh. 1, line 50, col. (9) on basis of line (b)					
(d)	Tot. transp. exps., frt., by terrs.	Line (a) + line (c)					

6/ Adjust for passenger portion of nonrevenue freight expenses as follows using Territories I and II as an example. Multiply line 3, columns (4) and (8), respectively, by _____ ratio. (Ratio equals 1.00 minus _____ ratio from Schedule E, sheet 2, line 28, column (12)). Insert the product as a credit in line 4, columns (4) and (8), respectively. Insert the product as a debit in line 4, columns (5) and (9), respectively. The effect of this computation is to reduce the freight expenses by the amount of the adjustment for "the passenger portion of the nonrevenue freight expenses," and to add this amount to the passenger expenses.

7/ Apportion the sum of the amounts shown in A. R. Schedule 320 column (e) line 160 and line 245, on the basis of the amounts shown in line 3, columns (4) and (8) and line 17, columns (13) and (17).

8/ Apportion the sum of the amounts shown in Annual Report, Schedule 320, column (h), line 160 and line 245, on the basis of the amounts shown in line 3, columns (5) and (9) and line 17, columns (14) and (18).

9/ Distribute total miscellaneous expenses from Annual Report, Schedule 320, line 228, column (b), to territories on the basis of the amounts shown in line (8) columns (2) and (6) and line 22, columns (11) and (15).

10/ Compute the percentage relationship by territories, i.e., for Territory I, columns (3), (4) and (5) divided by column (2).

11/ Insert in columns (2), (6), (11) and (15) the value of road as furnished by the Bureau of Valuation. Distribute each territorial road value on the basis of the territorial percentages shown in lines 11 and 25, respectively.

12/ From Schedule F, sheet 3, line 41.

13/ Freight portion of value by territories to be carried forward to Schedule F, sheet 1, line 2, columns (4), (5) or (6) as applicable. Passenger portion of value by territories to be carried forward to Schedule F, sheet 1, line 5, columns (4), (5), or (6) as applicable.

Segregation of the Value of Equipment by Territories and between Freight and Passenger
for Each Territory for Those Railroads Whose Expenses Are Separated by Territories

_____ Railway
Schedule F
Sheet 3 of 3

Line No.	Item (1)	Source of system data, col. (3) (2)	System (3)	Apportionment factor (4)	System expenses Freight (5)	System expenses Passenger (6)	Line No.
1	Value of steam locomotives	Bureau of Valuation		xxx	xxx	xxx	1
2	Yard portion of value of steam locomotives	Line 1 x _____ ratio from Sch. A, sh. 2, 2/, line (d)		Col. (5) (Frt.): Col. (3) x _____ ratio from Sch. A, sh.2, 2/, line (g) Col. (6) (Pass.): Remainder			2
3	Percentage distribution of gross ton-miles of locomotives and tenders, road service	A.R. Sch. 531, item 60, column (d)		Col. (5) (Frt.): Col. (d) ÷ (b), A.R. Sch. 531 Col. (6) (Pass.): Col. (d) ÷ (c), A.R. Sch. 531			3
4	Road port. of value of steam locomotives	Line 1 minus line 2		Line 3			4
5	Value of other locomotives	Bureau of Valuation		xxx	xxx	xxx	5
6	Yard portion of value of other locomotives	Line 5 x _____ ratio from Sch. A, sh. 2, 2/, line (o)		Col. (5) (Frt.): Col. (3) x _____ ratio from Sch. A, sh.2, 2/, line (g) Col. (6) (Pass.): Remainder			6
7	Road portion of value of other locomotives	Line 5 minus line 6		Line 3			7
8	Value of floating equipment	Bureau of Valuation		Col. (5) (Frt.): Col. (3) x _____ ratio (A.R. Sch.320, line 136, col. (e) ÷ col. (b) Col. (6) (Pass.): Remainder			8
9	Value of work equipment	Bureau of Valuation		Col.(5) (Frt.): Col.(3) x _____ ratio (A.R. Sch.320, line 137, col. (e) ÷ col. (b) Col. (6) (Pass.): Remainder			9
10	Value of miscellaneous equipment	Bureau of Valuation		Col. (5) (Frt.): Col.(3)x _____ ratio (A.R. Sch.320, line 138, col. (e) ÷ col. (b) Col. (6) (Pass.): Remainder			10

	Item (7)	Source of total amount, col.(9) (8)	Total Amount (9)	Total Percent (10)	Apportionment factor (11)	I (Territory) Freight (12)	I (Territory) Passenger (13)	II (Territory) Freight (14)	II (Territory) Passenger (15)	III (Territory) Freight (16)	III (Territory) Passenger (17)	IV (Territory) Freight (18)	IV (Territory) Passenger (19)	
11	Percent distrib.loco.miles,yd.swtchg.,frt.	See Sch.A, sh.1, line 3	xxx	100%	-		xxx		xxx		xxx		xxx	11
12	Steam loco. value, yd., frt. portion	Line 2, col. (5)		xxx	Line 11		xxx		xxx		xxx		xxx	12
13	Other loco. value, yard, freight	Line 6, col. (5)		xxx	Line 11		xxx		xxx		xxx		xxx	13
14	Percent distrib.loco.miles,yd.swtchg.pass.	2/	xxx	100%	-	xxx		xxx		xxx		xxx		14
15	Steam loco. value, yd., pass. portion	Line 2, col. (6)		xxx	Line 14	xxx		xxx		xxx		xxx		15
16	Other loco. value, yard, passenger	Line 6, col. (6)		xxx	Line 14	xxx		xxx		xxx		xxx		16
17	Percent. distrib. of gross ton-miles, locos. and tenders, freight	See Sch. A, sheet 1, line 5	xxx	100%	-		xxx		xxx		xxx		xxx	17
18	Steam locos., value, road, freight	Line 4, col. (5)		xxx	Line 17		xxx		xxx		xxx		xxx	18
19	Other loco. value, road, freight	Line 7, col. (5)		xxx	Line 17		xxx		xxx		xxx		xxx	19
20	Percent. distrib. of pass. loco.miles, rd.	2/	xxx	100%	-	xxx		xxx		xxx		xxx		20
21	Steam loco. value, road, pass. portion	Line 4, col. (6)		xxx	Line 20	xxx		xxx		xxx		xxx		21
22	Other loco. value, road, pass. portion	Line 7, col. (6)		xxx	Line 20	xxx		xxx		xxx		xxx		22
23	Total active freight train car days, other than mileage cars	Schedule H, sheet 2, footnote 3/, line 1		xxx	-		xxx		xxx		xxx		xxx	23
24	Percent. distrib. active frt. train car days, other than mileage cars	Line 23	xxx	100%	-		xxx		xxx		xxx		xxx	24
25	Value of freight train cars	Bureau of Valuation		xxx	Line 24		xxx		xxx		xxx		xxx	25
26	Passenger train car-miles	2/		xxx	-	xxx		xxx		xxx		xxx		26
27	Percent. distrib. of pass.train car-miles.	Line 26	xxx	100%	-	xxx		xxx		xxx		xxx		27
28	Value of passenger train cars	Bureau of Valuation		xxx	Line 27	xxx		xxx		xxx		xxx		28
29	Percent. distrib. of exps. of floating equip. freight	Sch. H, sheet 1, sum of lines 5 and 21	xxx	100%	-		xxx		xxx		xxx		xxx	29
30	Value of floating equipment, freight	Line 8, col. (5)		xxx	Line 29		xxx		xxx		xxx		xxx	30
31	Value of floating equipment, passenger	Line 8, col. (6)		xxx	Line 29	xxx		xxx		xxx		xxx		31
32	Percent. distrib. of M. of W. expenses, freight	Sch.F, sh.2, line 1,cols. (4)&(8), and line 15, cols. (13) & (17)	xxx	100%	-		xxx		xxx		xxx		xxx	32
33	Value of work equipment, freight	Line 9, col. (5)		xxx	Line 32		xxx		xxx		xxx		xxx	33
34	Percent. distrib. of M. of W. expenses, passenger	Sch.F, sh.2, line 1,cols. (5) & (9), and line 15, cols. (14) & (18)	xxx	100%	-	xxx		xxx		xxx		xxx		34
35	Value of work equipment, passenger	Line 9, col. (6)		xxx	Line 34	xxx		xxx		xxx		xxx		35
36	Subtotal (lines 12,13,15,16,18,19,21, 22,25,28,30,31,33,35)	-		xxx	-									36
37	Percent.distrib.subtotal freight portion	Line 36, cols. (12), (14), (16) & (18)	xxx	100%	-		xxx		xxx		xxx		xxx	37
38	Percent. distribution of subtotal, passenger portion	Line 36, cols. (13), (15), (17) & (19)	xxx	100%	-	xxx		xxx		xxx		xxx		38
39	Value of misc. equip, freight	Line 10, col. (5)		xxx	Line 37		xxx		xxx		xxx		xxx	39
40	Value of misc. equipment, passenger	Line 10, col. (6)		xxx	Line 38	xxx		xxx		xxx		xxx		40
41	Total value of equipment	Lines 36 + 39 + 40	1/	xxx	-									41

1/ This value is to reconcile with the total value of equip. accts. 51 to 58, incl., furnished by the Valuation Bureau, excl. of transportation water line properties (for example, the Morgan Line properties).
2/ Compute from data furnished by carrier in reply to letter of March 12, 1941.

Summary of Loss and Damage Payments by Commodity Groups

Railway
Schedule G
Sheet 1 of 1

Line No.	Commodity groups (1)	System loss and damage payments (furnished by railway, Statement I, item 6)(omit cents) (2)	Number of carloads from A.R. Sch. 541 1/ (3)	Expense per carload col. (2) ÷ col. (3) (4)	Number of tons from A.R. Sch. 541 1/ (5)	Expense per ton col. (2) ÷ col. (5) (6)	Revenue from A.R.Sch. 541 1/ (7)	Ratio of expenses to revenue (%) col. (2) ÷ col. (7) (8)	Line No.
1	Grain			$		$			1
2	Flour and other mill products								2
3	Cotton								3
4	Fresh fruits (except citrus)								4
5	Fresh fruits, citrus								5
6	Melons								6
7	Vegetables, fresh								7
8	All other products of agriculture								8
9	Livestock								9
10	Fresh and cured meats, packing-house products, dressed poultry								10
11	Butter, butter substitutes and cheese								11
12	Eggs in shell								12
13	All other animals & animal products ex. fertilizer & fert. material								13
14	Coal and coke								14
15	All other products of mines								15
16	Lumber and forest products								16
17	Petroleum oils								17
18	Vegetable oils								18
19	Sugar								19
20	Iron, steel and other metal articles, n.o.s. incl. wire								20
21	Machinery (other than agricultural) and boilers								21
22	Brick, artificial stone and building tile								22
23	Sewer pipe and drain tile (not metal)								23
24	Agricultural implements and parts, vehicles, horse drawn and parts								24
25	Automobiles, autotrucks, tractors, tires, parts, etc.								25
26	Furniture, new								26
27	Paper (newsprint)								27
28	Canned food products (in tin or glass)								28
29	Tobacco, manufactured products								29
30	Glass, flat other than plate, bottles, jars and jelly glasses								30
31	Ale, wine, beer, alcoholic liquors and mineral water								31
32	Unassigned								32
33	Total, carload								33
34	Total, l.c.l.		XXX	XXX					34
35	Grand total, carload and l.c.l.								35

1/ Data to be assembled on the tabulating machines from cards previously punched.

Summary of Carrier Operating Expenses, Rents and Taxes Separated between Running Service, Switching Service and Station Service

Line No.	Item (1)	Source (2)	System freight data (3)	Territory (4)	Territory (5)	Territory (6)	Territory (7)	Line No.
	Group I - Carload and L.C.L. Freight-train car expenses - Running, Other than mileage cars							
1	Freight-train cars - Running, mileage plus time portion, other than mileage cars	Sch. H, sheet 2, 3/, line (bb)	$	$	$	$	$	1
2	Total increased for overhead and taxes	Line 1 x (1.0 + ___ ratio 2/)						2
3	Revenue car-miles, other than mileage cars (excl. nonrevenue and caboose car-miles) (Ld. & Mty)	Sch. E, sheet 2, line 20						3
4	Cost per rev. car-mile (other than mileage cars)	Line 2 ÷ line 3	$	$	$	$	$	4
	Group II - Other running expenses common to all cars, mileage and other							
5	Floating equipment - Running	Sch. A, sh. 2, line 18, col. (11) 4/						5
6	Total increased for overhead and taxes	Line 5 x (1.0 + ___ ratio 2/)						6
7	Line-haul portion of switching expenses	Sch. H, sh. 3, line 25, col. (6) 5/						7
8	Nonrevenue port. of frt.-train car expe. - Mileage plus time portion 6/	Sch. H, sheet 2, 3/, line (ff)						8
9	Total expenses common to all cars	Lines 6, 7 and 8						9
10	Total rev. car-miles, incl. mileage cars (Ld. & Mty.)	Sch. E, sh. 2, line 17 + line 20 7/						10
11	Cost per rev. car-mile, incl. mileage cars (Ld. & Mty.)	Line 9 ÷ line 10 8/						11
	Group III - Carload and L.C.L. remaining running expenses treated on a gross ton-mile basis							
12	Locomotives, running	Sch. A, sh. 2, line 22, cols.(15),(19),etc.9/						12
13	Maintenance of way and structures	Sch.B,sh.2,l.24,col.(5)+ ls.1 & 15,col.(9)						13
14	Transportation - Rail-line	Sch. C, sh. 2, line 25, col. (5)						14
15	Total	Lines 12 to 14, incl.						15
16	Total increased for overhead and taxes	Line 15 x (1.0 + ___ ratio 2/)						16
17	Revenue GTM, cars and contents, excl. cabooses	Sch. E, sh. 2, line 15						17
18	Unit cost per revenue GTM	Line 16 ÷ line 17						18
	Group IV - Carload and L.C.L. switching expenses at origin and destination points only, treated on a per loaded car basis							
-	Equipment maintenance and rentals - Switching portion:							
19	Locomotives - Yard switching	Sch.A,sh.2,line 19,cols.(15),(19),etc.						19
20	Locomotives - Train switching	Sch.A,sh.2,line 20,cols.(15),(19),etc.						20
21	Floating equipment - Switching portion	Sch.A,sh.2, line 18,col.(12) 4/						21
22	Freight-train cars, switch.port., mil. exp.	Sch.A,sh.3, line 25, col. (18), (18), etc.						22
23	Maint. of way & structures - Train & yard switching	Sch.B,sh.2,line 24, cols. (6) + (7)						23
24	Transportation - Train & yard switching	Sch.C, sh.2, line 25, cols. (6) + (7)						24
25	Total	Lines 19 to 24, incl.						25
26	Total increased for overhead and taxes	Line 25 x (1.0 + ___ ratio 2/)						26
27	Carrier terminal switching, industry and team tracks	Sch.H,sh.3,lineII,cols.(6)or (12) as appropriate 10/						27
28	Carrier terminal switching, freighthouse tracks at origin and destination points	Sch.H,sh.3,line 14,cols.(6)or (12) as appropriate 10/						28
	Group V - L.C.L. switching expenses, account transfer, treated on loaded car-mile basis							
29	Carrier term. switchg., frthouse.tracks, acct.transfer	Sch.H,sh.3,line 17,cols.(6) or (12)						29
30	L.C.L. loaded car-miles	Sch.E,sh.3,line 10,cols.(3),(4), etc.						30
31	Cost per loaded car-mile	Line 29 ÷ line 30						31
	Group VI - Carload and L.C.L. freight-train car maintenance and rentals, other than mileage cars, in switching service plus detention for loading and unloading at origin or destination only, expenses treated on loaded car basis							
32	Frt.-train car exps., industry & team tracks - Carload	11/, line (i)						32
33	Cost per loaded car,frt.-train car exps.,industry & team trks	2.75 (car-days)x ___ (per day) from 3/, line(m)						33
34	Frt.-train car exps., freighthouse tracks - L.C.L.	12/, line (b)						34
35	Cost per loaded car,frt.-tr.exps.,frthouse.tracks	1.4(car-days)x ___ (per day) from 3/, line (m)						35
	Group VII - L.C.L. freight-train car maintenance and rentals, other than mileage cars in switching service plus detention for loading and unloading, account transfer only, expenses treated on loaded car-mile basis							
36	Frt.-train car exps., frthouse.tracks, acct. transfer	12/, line (d)						36
37	Expenses per loaded car-mile, account transfer	Line 36 ÷ line 30						37
	Group VIII - Carload and L.C.L. station expenses, clerical, at origin and destination, treated on a consignment basis 13/							
38	Station expenses - Carload, clerical	Sch. D, sh. 1, line 10A, col. (6)						38
39	Station expenses - L.C.L., clerical	Sch. D, sh. 1, line 10A, col. (7)						39
	Group IX - L.C.L. station expenses, platform handling at origin & destination, treated on a per ton handled basis 13/							
40	Station expenses, platform	Sch. D, sh. 1, line 17, col. (13)						40
	Group X - L.C.L. station expenses, platform handling account transfer, treated on net ton-mile basis							
41	Station expenses, platform cost for tons transferred (assignable as line-haul cost)	Sch. D, sh. 1, line 18, col.(13)						41
42	Net ton-miles l.c.l. traffic	Sch. E, sh. 3, line 8						42
43	Unit cost per l.c.l. net ton-mile	Line 41 ÷ line 42						43
44	Total frt. oper. exps., rents and taxes (excl. passenger portion of nonrevenue frt. exps., L. & D. claim payments and miscl. opers.) 14/	Lines 2, 6, 8, 16, 26, 32, 34, 36, 38, 39, 40 and 41	$	$	$	$	$	44

(For footnotes see Schedule H, sheet 2)

1/ Compute ratio of revenue car-miles to total car-miles, other than mileage as follows: Schedule E, sheet 2, column (14), line 20 ÷ line 18 _____ (ratio).

2/ Ratio from Schedule E, sheet 1, line 16, column (5). NOTE: Convert the percentage figure to ratio before bringing forward. For example, if the figure shown on Schedule E equals 15%, the ratio equals 0.15. This figure added to 1.0 equals 1.15. _____ (ratio).

3/ Compute cost per active car-day, revenue and nonrevenue traffic, as follows:

Item	Source	Amount
(a) Time portion of freight train car expenses, other than mileage cars	For system expense, see Schedule A, sheet 2, line 18, column (9); for territorial expense see Schedule A, sheet 3, line 30, columns (18), (21) or (24) as applicable	$
(b) Total increased for overhead and taxes	Line (a) x (1.0 + ratio) from 2/	$
Computation of total active car days, revenue and nonrevenue, other than mileage cars		
(c) Car days in running service, revenue and nonrevenue, including mileage cars	Sch. A, sheet 3, line 1, col. (11)	
(d) Ratio of car-miles, other than mileage cars, revenue and nonrevenue, to total car-miles	Sch. E, sheet 2, col. (14), lines 18÷16	
(e) Car days, running service, revenue and nonrevenue, other than mileage cars	Line (c) x line (d)	
Computation of active car days in terminals, other than mileage cars		
(f) Car days in terminals, revenue only, including mileage cars but excluding l.c.l. cars	Sch. A, sheet 3, col. (11), lines 2 and 3, 6, 7, 12-15	
(g) Car days in terminals, other than mileage cars, carload traffic only	Line (f) x ratio from 11/ line (f)	
(h) Car days, freighthouse cars only	Sch. A, sheet 3, col. (11), lines 4 & 5	
(i) Car days, interchange switching and inter- and intratrain switching	Sch. A, sheet 3, col. (11), lines 8, 9, 16, and 17	
(j) Car days, interchange switching, inter- & intratrain switching, other than mileage cars	Line (i) x line (d)	
(k) Car days, nonrevenue, in terminals	Sch.A, sheet 3,col.(11), lines 18 & 19	
Total active car days, other than mileage cars		
(l) Total car days, revenue and nonrevenue, other than mileage cars	Lines (e),(g),(h),(j), and (k)	
Computation of cost per active car day, other than mileage cars		
(m) Cost per car day, other than mileage cars, including overhead and taxes	Line (b) ÷ line (l)	
(n) Cost per car day, other than mileage cars, excluding overhead and taxes	Line (a) ÷ line (l)	
Computation of revenue car-day costs, other than mileage cars, running service		
(o) Ratio of nonrevenue car-miles to total car-miles, other than mileage cars	Sch. E, sheet 2, col. (14), line 19 ÷ line 18	
(p) Nonrevenue portion of car days in running service	Line (e) x line (o)	
(q) Revenue car days in running service, other than mileage cars	Line (e) minus line (p)	
(r) Aggregate cost for revenue car days, other than mileage cars, running service, excluding overhead and taxes	Line (q) x line (n)	

3/ - Continued

Item	Source	Amount
Computation of nonrevenue car days, running, switching, plus loading and unloading		
(s) Car days in inter- and intratrain switching, revenue and nonrevenue, including mileage cars	Sch.A, sheet 3, col.(11), lines 16 and 17	
(t) Car days, inter- and intratrain switching, revenue and nonrevenue, other than mileage cars	Line (s) x line (d)	
(u) Nonrevenue car days, inter- and intratrain switching, other than mileage cars	Line (t) x line (o)	
(v) Total nonrevenue car days, loading, unloading, running and switching (excl. intchg.)	Lines (k), (o), and (u)	
Computation of active revenue car-day cost in running service plus interchange, intertrain and intratrain switching		
(w) Revenue car days in interchange switching and inter- and intratrain switching, other than mileage cars	Line (j) minus line (u)	
(x) Aggregate cost for revenue car days in interchange, inter- and intratrain switching, other than mileage cars, excluding overhead and taxes	Line (w) x line (n)	
(y) Total revenue car-day cost, running service, plus interchange, inter- and intratrain switching, other than mileage cars, excluding overhead and taxes	Line (r) + line (x)	
Computation of the revenue portion of the mileage portion of the freight train car expenses, other than mileage cars		
(z) Running port. of frt. train car mileage exp., other than mileage cars	Sch. A, sheet 3, line 24, cols. (15), (18), etc.	
(aa) Rev. car-mile port. of frt. train car mileage exps., other than mileage cars	Line (z) x _____ ratio, from Sch. H, sheet 2 1/	
Total freight train car expenses, running, mileage plus time portion, other than mileage cars (insert in Sch. H, sheet 1, line 1		
(bb) Total frt. train car exps., rev. port., mileage plus time, run. service, other than mileage cars, excl. overhead and taxes	Line (y) + line (aa)	
Computation of the nonrevenue portion of freight train car expenses, including the nonrevenue portion of the car-day expenses, running, switching, loading, and unloading, and the nonrevenue portion of the mileage expenses, running service only (insert total in Sch. H, sheet 1, line 8)		
(cc) Nonrev. port. of frt. train car exps., mileage port., running service, other than mileage cars, excl. overhead and taxes	Line (z) minus line (aa)	
(dd) Total nonrev.frt.train car day exps.,running, switching, loading and unloading, other than mileage cars, excl. overhead and taxes	Line (v) x line (n)	

(See reverse side for remining footnotes)

(Footnotes for Schedule H, sheet 1 - continued)

1/ - Continued

Item	Source	Amount
(ee) Total nonrevenue freight train car expense, mileage plus time portion, excluding overhead and taxes	Line (cc) + line (dd)	
(ff) Total nonrevenue freight train car expenses, mileage plus time portion, including overhead and taxes	Line (ee) x (1.0 + _____ ratio) from 2/	
Reconciliation of freight train car expenses with total expenses in Sch. A, sheet 2		
(gg) Total freight train car expenses, running, mileage plus time portion, other than mileage cars incr. for overhead and taxes	Sch. H, sheet 1, line 1, col. (3) x (1.0 + ratio 2/)	
(hh) Freight train car expenses, switching, mileage portion, incr. for overhead & taxes	Sch. H, sheet 1, line 22, col. (3) x (1.0 + ratio 2/)	
(ii) Total nonrevenue freight train car expenses, mileage plus time portions	Sch. H, sheet 1, line 6, col. (3)	
(jj) Freight train car-day expenses, switching at origin and destination industries, team tracks and freighthouses	Sch. H, sheet 1, col. (3), lines 32, 34, and 36	
(kk) Total freight train car expenses incr. for overhead and taxes	Sum of lines (gg) to (jj), inclusive	
(ll) Reconciliation - line (kk) should agree with total freight train car expenses, mileage plus time portion incr. for overhead & taxes	Schedule A, sheet 2, line 16, (columns (8) plus (9)) x (1.0 plus _____ ratio 2/). For territorial expenses, see Schedule A, sheet 3, line 33, (columns (18), (21) or (24) as applicable) x 1.0 plus _____ ratio 2/).	
Reconciliation of active car days		
(mm) Total active car days for reconciliation with Sch. A, sheet 3, line 23, col. (11)	Sum of lines c + f + h + i + k	

4/ Where territorial distribution is made, distribute on the basis of special study in each case based upon the location of the floating equipment. For this purpose see Ex Parte 122 file, and distribution of operating expenses made by carrier on Schedule C, sheet 1, lines 38-39.

5/ Where territorial separation is made, bring forward the territorial totals, line 25, cols. (6) and (12), respectively.

6/ Freight-train car repairs, other than mileage cars, chargeable to the movement of nonrevenue traffic must be distributed over the traffic moving both in railroad-owned equipment and in cars rented on a mileage basis. For this reason the freight-train car expenses incurred in the handling of company material are distributed over all revenue traffic on the basis of car-miles.

7/ If cars rented on a mileage basis are used for the hauling of company materials, subtract the nonrevenue car-miles thus produced (see Schedule E, sheet 2, footnote 5) from the car-miles shown in Schedule E, sheet 2, line 17, column (14). The remainder should then be added to line 20 brought forward.

8/ Compute car-mile costs for cars rented on a mileage basis by adding to the cost per revenue car-mile, shown on line 11 (loaded + empty movement) the appropriate rental charge. (For example, 1.5 cents per car-mile, loaded and empty, for tank cars and gondolas and hoppers, 2.0 cents for refrigerator cars, etc. (AAR Mileage Tariff, Series No. 7)). Such rental charge must be increased for overhead and taxes by multiplying the rental per mile (i.e., 1.5 cents; 2.0 cents, etc.) by (1.0 + _____ ratio, from footnote 2). NOTE: The ratio of overhead expenses and taxes to operating expenses is derived by dividing the former by the operating expenses, including mileage rental payments.

9/ If carrier provides a separation of road locomotive repairs by territories on Sch. A, sheet 1, lines 21 to 36, bring forward territorial figures from Sch. A, sheet 2, line 22, cols. (19), (21), and (23), respectively. If carrier provides no such territorial breakdown and the separation was statistically made on the basis of the locomotive miles and locomotive ton-miles operating in each territory, bring forward the sum of lines 23 and 24, Sch. A, sheet 2, cols. (19), (21), and (23), respectively.

10/ See Schedule H, sheet 3, cols. (7) and (13) for the unit cost per car. Where territorial separation is made bring forward the territorial data.

11/ In computing the aggregate freight-train car expenses handled in other than mileage cars, data must be adjusted for (1) Overheads and taxes, (2) Distribution of freight-train car expenses incurred in the hauling of nonrevenue freight, and (3) Separation of the total car-days in terminal between that for mileage cars and that for other than mileage cars. Separation made by assigning to mileage cars all carload traffic reported in the freight commodity statistics customarily handled in refrigerator cars and tank cars. (In 1938 only 5.6% of the tank cars were railroad owned. The comparable figure for refrigerators was 15.1%. All Class I carriers. From Stat. of Railways in U.S., 1939, pages 21 and 23). Balance assigned to "Other than mileage" cars. The necessary ratio is developed on lines (a) to (f) below. This ratio is then applied to the total car-days in terminals for carload traffic to obtain the car days in terminal chargeable to "Other than mileage" cars. This step is taken on line (h) below. The car-days in terminal for "Other than mileage" cars, carload traffic, is then multiplied by the car-day cost per active car-day to obtain the aggregate freight-train car expense, industry and team track, "Other than mileage" cars, for carload traffic. The product is to be inserted in Schedule H, sheet 1, line 32, column (3).

Item	Source	Amount
(a) Carloads assigned to refrigerator cars	A.R. Sch. 541, cols. (d) plus (f) plus twice col. (b), classes 110-143, 210-222, 231-251, 630	
(b) Carloads assigned to tank cars	A.R. Sch. 541, cols. (d) plus (f) plus twice col. (b), classes 280, 360, 370, 441, 450, 451, 460-462, 472, 650, 661	
(c) Total carloads assigned to refrigerator and tank cars (Total assumed to approximate the mileage cars originated & terminated	Sum of (a) plus (b)	
d) Total carload traffic mileage plus "All other" cars	A.R. Sch. 541, Class 650, cols. (d) plus (f) plus twice (b)	
(e) Carloads, originated and terminated, "Other than mileage" cars	Line (d) minus line (c)	
(f) Ratio of carloads, "Other than mileage" cars, to the total carloads, carload traffic	Line (e) ÷ line (d)	
(g) Car-days incl. mileage cars, sv. plus detention for ldg.& unldg.	Sch. A, sheet 1, col. (11), sum of lines 2, 3, 6, 7, and 12-15	
(h) Car-days, "Other than mileage" cars, sv. plus detention for loading and unloading	Line (f) x line (g)	
(i) Aggregate frt. trn. car exp.other than mileage cars, carld.traf.	Line (h) x cost per active car-day from footnote 3, line (a)	

12/ Compute freight-train car expenses for L.C.L. traffic at origin and destination points, also at transfer points, as follows: (Assumes use of other than mileage cars)

Item	Source	Amount
(a) Car-days, including switching plus detention for loading and unloading, origin and destination points only	Sch. A, sheet 1, 7/, line (c) x _____ days per loaded car, (Sch. A, sheet 1, line 4, cols. (7) + (8) + (9)) ÷ _____ ratio x line 5, col. (7). See Sch. A, sheet 1, 6/, line 5, for ratio.	
(b) Aggregate expenses, L.C.L. traffic at origin and destination points	Line (a) x _____ cost per car-day from 3/, line (a)	
(c) Car-days, L.C.L., account transfer	Sch. A, sheet 1, 7/, line (d) x _____ days per loaded car (See line (a))	
(d) Aggregate expenses, L.C.L., account transfer	Line (c) x _____ cost per car-day from 3/, line (a)	

13/ For unit costs, see Schedule D, lines 12 or 14.

14/

Item	Source	Amount
Reconciliation of total expenses, Schedule H, with total expenses, Schedule E, sheet 1, line 15, column (5)		
(a) Aggregate expenses	Sch. H, sheet 1, line 44, column (3).	
Items included in Schedule E but not brought forward in Schedule H		
(b) Hire of mileage cars	Sch. A, sheet 2, line 11, column (1)	
(c) Maintenance of grain elevators and storage warehouses	Sch. B, sheet 2, column (7), lines 9 + 10	
(d) Miscellaneous operations	Sch. E, sheet 1, line 10, column (3)	
(e) _____		
(f) Total	Lines (b) to (d), inclusive	
(g) Total including overhead and taxes	Line (f) x (1.0 + _____ ratio, 2/	
(h) Grand total	Lines (a) + (g)	

Separation of Switching Expenses by Classes of Switching 5/

(Expenses exclude all freight-train car expenses except switching portion of mileage expenses)

_____ Railway
Schedule H
Sheet 3 of 3

Line No.	Item	System or territory						Territory						Line No.
	(1)	Number of cars 1/ (2)	Weighting 2/ (3)	Equated handlings (Cols. (2) x (3)) (4)	Ratio of equated handlings to total 3/ (5)	Separation of expenses (Line 26, col. (6) x ratio col.(5)) (6)	Expenses per car (Col. (6) ÷ col. (2)) (7)	Number of cars 1/ (8)	Weighting 2/ (9)	Equated handlings (Cols. (8) x (9)) (10)	Ratio of equated handlings to total 3/ (11)	Separation of expenses (Line 26, col. (12) x ratio col.(11)) (12)	Expenses per car (Col.(12) ÷ col. (8)) (13)	
	Terminal Switching - Carload													
1	Carrier terminal switching, industry & team tracks (loads)													1
2	Carrier terminal switching, industry & team tracks (empties)													2
3	Connection terminal switching (cars originated or terminated by respondent & receiving connecting line road haul (loads)													3
4	Connection terminal switching (cars originated or terminated by respondent & receiving connecting line road haul (empties)													4
5	Intraterminal switching (loads)													5
6	Intraterminal switching (empties)													6
7	Interterminal switching (loads)													7
8	Interterminal switching (empties)													8
9	Other (designate) _____													9
10	Other (designate) _____													10
11	Total switching - Carload (lines 1 to 10, inclusive)													11
	Terminal Switching - L. C. L.													
12	Carrier terminal switching, freight-house (loads) at orig. & dest.													12
13	Carrier terminal switching, freight-house (empties) at orig. & dest.													13
14	Subtotal - Freighthouse switching, origin &destination													14
15	Carrier terminal switching, freight-house (loads) account transfer													15
16	Carrier terminal switching, freight-house (empties) account transfer													16
17	Subtotal - Terminal switching, frthouse, acct. transfer													17
18	Total switching - L.C.L.													18
	Switching treated as variable with distance (on car-mile basis)													
19	Interchange switching (loads)													19
20	Interchange switching (empties)													20
21	Intermediate switching (loads)													21
22	Intermediate switching (empties)													22
23	Intertrain & intratrain switching (loads)													23
24	Intertrain & intratrain switching (empties)													24
25	Total, lines 19 to 24, incl.													25
26	Grand total (lines 11, 18 & 25)					4/						4/		26

1/ See Schedule A, sheet 3, column (3) for the number of cars.
2/ Weighting to be furnished by carrier from available switching studies, or constructively developed by the Bureau of Statistics from presently available information.
3/ Idnes 1 to 25 of column (4) to be divided by grand total appearing in line 26. (Omit count of non-revenue cars from lines 9 and 10).
4/ Insert system or territorial switching expenses, as appropriate, from Schedule H, sheet 1, line 26.
5/ Where territorial break-down of expenses is made, use as many sheets of this Schedule as are required.

Territorial Summary of Aggregate Costs, Aggregate Units and Unit Costs

_____ Territory

Territorial Summary - Sheet 1 of 8

Line No.	Carrier (1)	Divisions or states assigned to territory (2)	Group I Carload and L.C.L. Freight-train car expenses - Running, other than mileage cars: Expenses (Sch. H, sheet 1, line 2) (3)	Revenue car-miles, other than mileage cars-Loaded and empty (Sch. H, sh. 1, line 3) (4)	Cost per revenue car-mile-Loaded & empty Col. (3) ÷ col. (4)) (5)	Group II Carload and L.C.L. Other running expenses common to all cars, mileage and other: Expenses (Sch. H, sheet 1, line 9) (6)	Total revenue car-miles including mileage cars, loaded & empty (Sch. H, sh. 1, line 10) (7)	Cost per revenue car-mile-Loaded & empty (Col. (6) ÷ col. (7)) (8)	Total cost per car-mile other than mileage cars (Col. (5) + col. (8)) 1/ (9)	Group III Carload and L.C.L. Remining running expenses treated on a gross ton-mile basis: Total Expenses (Sch. H, sheet 1, line 16) (10)	Revenue gross ton-miles - Cars and contents excl. caboose (Sch. H, sh. 1, line 17) (11)	Cost per revenue gross ton-mile (Col. (10) ÷ col. (11)) (12)	Line No.
1													1
2													2
3													3
4													4
5													5
6													6
7													7
8													8
9													9
10													10
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41													41
42													42
43													43
44													44
45													45
46													46
47													47
48													48
49													49
50													50
51													51
52													52
53													53
54													54
55	Total												55

1/ The cost per revenue car-mile for cars rented on a mileage basis will equal column (8) plus the mileage rental paid.

Territorial Summary of Aggregate Costs, Aggregate Units and Unit Costs, Continued

_____ Territory

Territorial Summary - Sheet 2 of 8

Line No.	Carrier (1)	Group IV Carload switching exps., orig. & dest. only, treated on per loaded car basis: Expenses (Sch. H, sheet 1, line 27, cols.(3), (4), etc.)) (2)	Number of cars switched loads (Sch. H, sh.3, lines 1,3,5, & 7, cols. (2) or (8)) (3)	Cost per loaded car (Col. (2) ÷ col. (3)) (4)	Group IV L.C.L. switching exps., origin & dest. only, treated on per loaded car basis: Expenses (Sch. H, sheet 1, line 28, cols.(3), (4), etc.)) (5)	Number of cars switched loads (Sch. H, sh.3, line 12, Cols. (2) or (8)) (6)	Cost per loaded car (Col. (5) ÷ col. (6)) (7)	Group V L.C.L. switching exps., acct. transfer, treated on loaded car-mile basis: Expenses (Sch. H, sheet 1, line 29, cols.(3), (4), etc.)) (8)	Number of l.c.l. loaded car-miles (Sch. H, sh.1, line 30, cols. (3), (4), etc.)) (9)	Total cost stated in terms of loaded car-miles (Col. (8) ÷ (9)) (10)	Group VI Carload frt. train car maint. & rentals other than mileage, origin or dest. 1/: Expenses (Sch. H, sheet 1, line 32, cols.(3), (4), etc.)) (11)	Loaded cars (Sch. H, sheet 2 11/ line (e)) 2/ (12)	Cost per loaded car (Col. (11) ÷ col. (12)) (13)	Line No.
1														1
2														2
3														3
4														4
5														5
6														6
7														7
8														8
9														9
10														10
11														11
12														12
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14														14
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45														45
46														46
47														47
48														48
49														49
50														50
51														51
52														52
53														53
54														54
55	Total													55

1/ Freight-train car maintenance and rentals, other than mileage cars, in switching service, plus detention for loading and unloading at origin or destination only, expenses treated on loaded car basis.

2/ Where the carrier's expenses and statistics are broken down by territories compute the loaded cars by applying the ratio shown in Schedule H, sheet 2, footnote 11, line (f), to the loaded cars for the territory involved. (Schedule H, sheet 3, sum of lines 1, 3, 5, and 7)

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Territorial Summary of Aggregate Costs, Aggregate Units and Unit Costs, Continued

_____ Territory

Territorial Summary - Sheet 3 of 8

Line No.	Carrier	Group VI L.C.L. frt. train car maint. & rentals other than mileage, origin or dest. 1/			Group VII L.C.L. frt. train car maint. & rentals, switching service, acct. transfer only 2/			Group VIII Carload station expenses, clerical, origin or destination			Group VIII L.C.L. station expenses, clerical, origin or destination			Line No.
		Expenses (Sch. H, sh. 1, line 34, cols. (3) (4), etc.)	Loaded cars (Sch. H, sh. 3, line 12, col.(2))	Cost per loaded car (Col.(2) + col. (3))	Expenses (Sch.H, sh. 1, line 36, cols. (3), (4), etc.)	Loaded car-miles (Sch.H, sh. 1, line 30, cols. (3), (4), etc.)	Total cost stated in terms of loaded car-miles (Col. (5) + (6))	Expenses (Sch.H, sh. 1, line 38, cols. (3), (4), etc.)	Consign-ments (Sch.D, line 11, col.(11))	Cost per consign-ment (Col.(8) + col.(9))	Expenses (Sch.H, sh. 1, line 39 cols. (3), (4), etc.)	L.C.L. tons (Sch.D, sh. 1, line 13, col. (13))	Cost per L.C.L. ton (Col. (11)+ col.(12))	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
1														1
2														2
3														3
4														4
5														5
6														6
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8														8
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50														50
51														51
52														52
53														53
54														54
55	Total													55

1/ Freight-train car maintenance and rentals, other than mileage cars, in switching service, plus detention for loading and unloading at origin or destination only, expenses treated on loaded car basis.
2/ L.C.L. freight-train car maintenance and rentals, other than mileage cars, in switching service, plus detention for loading and unloading, account transfer only, expenses treated on loaded car-mile basis.

Territorial Summary of Aggregate Costs, Aggregate Units and Unit Costs, Continued

Territory

Territorial Summary - Sheet 4 of 6

Line No.	Carrier	Group IX L.C.L. platform costs, origin or destination: Expenses (Sch. H, sheet 1, line 40, cols. (3), (4), etc.)	Group IX: L.C.L. tons, origin plus destination (Sch. D, sheet 1, line 13, col. (13))	Group IX: Cost per ton orig. or dest. (Col. (2) ÷ col. (3))	Group X L.C.L. platform handling account transfer: Expenses (Sch. H, sheet 1, line 41, cols. (3), (4), etc.)	Group X: L.C.L. net ton-miles (Sch. H, sheet 1, line 42, cols. (3), (4), etc.)	Group X: Cost per net ton-mile (Col. (5) ÷ col. (6))	Total freight operating expenses, rents & taxes, excl. passenger portion of nonrevenue freight expenses, loss & damage payments and misc. operations 1/	Line No.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1									1
2									2
3									3
4									4
5									5
6									6
7									7
8									8
9									9
10									10
11									11
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49									49
50									50
51									51
52									52
53									53
54									54
55	Total								55

1/ Compute column (8) as follows: Sum of Territorial Summary, sheet 1, line 55, columns (3), (6), (10); sheet 2, line 55, columns (2), (5), (8), (11); sheet 3, line 55, columns (2), (5), (8), (11) and sheet 4, line 55, columns (2) and (5). The total in column (8) should reconcile with Schedule H, sheet 1, line 44, columns (3), (4), etc.

Territorial Summary of L.C.L. and Passenger Deficiencies, and Cost of Providing 5-3/4% Return on L.C.L. Portion of Valuation

_____ Territory

Territorial Summary - Sheet 5 of 6

Line No.	Carrier	C.L. oper. exps., rents and taxes (Sch. F, sh. 3, line 24)	L. C. L. deficiencies 1/				Passenger deficiencies 1/				Cost of prov. 5-3/4% ret. on L.C.L. value			Line No.
			L.C.L. oper. inc. or def. (after oper. exps., rents, taxes and P.U.& D.) (Sch. F, sh. 3, line 26)	Ratio of L.C.L. inc. or def. to C.L. oper. exps., rents and taxes (Col. (3) ÷ col. (2))	Total L.C.L. inc. or def. (after ret. at 5-3/4%) (Sch. E, sheet 3, line 29)	Ratio of L.C.L. inc. or deficit (after ret. at 5-3/4%) to C.L. oper. exps., rents and taxes (Col.(5) ÷ col. (2))	Passenger operating income or deficit (Sch. E, sheet 3, line 33)	Ratio of pass. oper. inc. or def. to C.L. oper. exps., rents and taxes (Col. (7) ÷ col. (2))	Total pass. inc. or def. (after ret. of 5-3/4%) (Sch. E, sheet 3, line 36)	Ratio of pass. income or deficit (after ret. of 5-3/4%) to C.L. oper. exps., rents and taxes (Col. (9) ÷ col.(2))	L.C.L. oper. exps., rents and taxes (excl. L.& D. and P.U & D.) (Sch. F, line 7)	Cost of providing 5-3/4% ret. on L.C.L. portion of valuation (Sch. F, line 9)	Ratio of L.C.L. 5-3/4% return to L.C.L. oper. exps., rents and taxes (excl. L.& D. and P.U.& D.) Col.(12) ÷ col. (11))	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
1														1
2														2
3														3
4														4
5														5
6														6
7														7
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48														48
49														49
50														50
51														51
52														52
53														53
54														54
55	Total													55

1/ Indicate income by a plus sign (+) or a black entry. Indicate deficit by a minus sign (-) or a red entry. Apply to each column, (3) to (10), inclusive.

Territorial Summary of L.C.L. and Passenger Deficiencies, and Cost of Providing 4% Return on L.C.L. Portion of Valuation 1/

_____ Territory

Line No.	Carrier	C.L. oper. exps., rents and taxes (Sch.E, sh.3, line 24)	L. C. L. deficiencies 2/				Passenger deficiencies 2/				Cost of prov. 4% ret. on L.C.L. value			Line No.
			L.C.L. oper. inc. or def. (after oper. exps., rents, taxes and P.U.&D.) (Sch.E, sh.3, line 26)	Ratio of L.C.L. inc. or def. to C.L. oper. exps., rents and taxes (Col. (3) + col. (2))	Total L.C.L. inc. or def. (after ret. at 4%) (Sch. E, sheet 3, line 29)	Ratio of L.C.L. inc. or deficit (after ret. at 4%) to C.L. oper. exps., rents and taxes (Col.(5) + col. (2))	Passenger operating income or deficit (Sch. E, sheet 3, line 33)	Ratio of pass. oper. inc. or def. to C.L.oper. exps., rents and taxes (Col. (7) + col. (2))	Total pass. inc. or def. (after ret. of 4%) (Sch. E, sheet 3, line 36)	Ratio of pass. income or deficit (after ret. of 4%) to C.L. oper. exps., rents and taxes (Col. (9) + col. (2))	L.C.L. oper. exps., rents and taxes (excl. L.&D. and P.U.&D.) (Sch. F, line 7)	Cost of providing 4% return on L.C.L. portion of valuation (Sch. F, line 17)	Ratio of L.C.L. 4% return to L.C.L. oper. exps., rents and taxes (excl. L.&D. and P.U.&D.) (Col.(12) + col. (11))	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
1														1
2														2
3														3
4														4
5														5
6														6
7														7
8														8
9														9
10														10
11														11
12														12
13														13
14														14
15														15
16														16
17														17
18														18
19														19
20														20
21														21
22														22
23														23
24														24
25														25
26														26
27														27
28														28
29														29
30														30
31														31
32														32
33														33
34														34
35														35
36														36
37														37
38														38
39														39
40														40
41														41
42														42
43														43
44														44
45														45
46														46
47														47
48														48
49														49
50														50
51														51
52														52
53														53
54														54
55	Total													55

1/ When the L.C.L. deficiencies and passenger deficiencies are computed to include an allowance for a return of 4%, Schedule E, sheet 3, lines 25 to 37, column (3) should be reworked on the basis of a 4% return (see lines 28 and 35).

2/ Indicate income by a plus sign (+) or a black entry. Indicate deficit by a minus sign (-) or a red entry. Apply to each column (3) to (10), inclusive.

Territorial Summary of Cost to the Carload Traffic of Providing 5-3/4% Return and 4% Return, Respectively, on C.L. Portion of Valuation, on Total Freight Valuation (C.L. and L.C.L.) and on Total Valuation Freight Plus Passenger

5150

Territory

Territorial Summary - Sheet 7 of 8

Line No.	Carrier	Carload oper. exps., rents & taxes (Sch. E, sh. 3, line 24)	Cost of providing 5-3/4% return on C.L. portion of valuation: Amount (Sch. F, line 11)	Cost of providing 5-3/4% return on C.L. portion of valuation: Ratio of C.L. 5-3/4% ret. to C.L. oper. exps., rents and taxes (Col. (3) + col. (2))	Cost of providing 5-3/4% return on total freight valuation, C.L. and L.C.L.: Amount (Sch. F, line 13)	Cost of providing 5-3/4% return on total freight valuation, C.L. and L.C.L.: Ratio of total frt. 5-3/4% ret. C.L. & L.C.L. to C.L. oper. exps., rents and taxes (Col. (5) + col. (2))	Cost of providing 5-3/4% return on total valuation freight and passenger: Amount (Sch. F, line 15)	Cost of providing 5-3/4% return on total valuation freight and passenger: Ratio of total 5-3/4% ret., frt. and pass. to C.L. oper. exps., rents & taxes (Col. (7) + col. (2))	Cost of providing 4% return on C.L. portion of valuation: Amount (Sch. F, line 19)	Cost of providing 4% return on C.L. portion of valuation: Ratio of C.L. 4% ret. to C.L. oper. exps., rents and taxes (Col. (9) + col. (2))	Cost of providing 4% return on total freight valuation, C.L. and L.C.L.: Amount (Sch. F, line 21)	Cost of providing 4% return on total freight valuation, C.L. and L.C.L.: Ratio of tot. frt. 4% ret. C.L. & L.C.L. to C.L. oper. exps., rents and taxes (Col. (11) + col. (2))	Line No.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
1													1
2													2
3													3
4													4
5													5
6													6
7													7
8													8
9													9
10													10
11													11
12													12
13													13
14													14
15													15
16													16
17													17
18													18
19													19
20													20
21													21
22													22
23													23
24													24
25													25
26													26
27													27
28													28
29													29
30													30
31													31
32													32
33													33
34													34
35													35
36													36
37													37
38													38
39													39
40													40
41													41
42													42
43													43
44													44
45													45
46													46
47													47
48													48
49													49
50													50
51													51
52													52
53													53
54													54
55	Total												55

6102

Territorial Summary of the Cost to the Carload Traffic of Providing 4% Return on Total Valuation Freight and Passenger, and of Providing a System Current Rate of Return Earned during Year 1939

9156

Territory

Territorial Summary - Sheet 8 of 8

Line No.	Carrier	Carload operating expenses, rents and taxes (Sch. E, sheet 3, line 24)	Cost of providing 4% return on total valuation, freight and passenger: Amount (Schedule F, line 23)	Cost of providing 4% return on total valuation, freight and passenger: Ratio of total 4% return, freight and passenger, to C.L. operating expenses, rents and taxes (Col. (3) ÷ col. (2))	Cost of providing current rate of return: Current return all services, 1939 (Schedule F, line 25) 1/	Cost of providing current rate of return: Valuation of carrier property (Schedule F, line 1)	Cost of providing current rate of return: Current rate of return, all services (Col. (5) ÷ col. (6)) 1/			Line No.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1	~~Kansas City Southern Ry. - Territory I~~									1
2	~~Missouri-Kansas-Texas R. R. - Territory I~~									2
3										3
4										4
5										5
6										6
7										7
8										8
9										9
10										10
11										11
12										12
13										13
14										14
15										15
16										16
17										17
18										18
19										19
20										20
21										21
22										22
23										23
24										24
25										25
26										26
27										27
28										28
29										29
30										30
31										31
32										32
33										33
34										34
35										35
36										36
37										37
38										38
39										39
40										40
41										41
42										42
43										43
44										44
45										45
46										46
47										47
48										48
49										49
50										50
51										51
52										52
53										53
54										54
55	Total									55

1/ Indicate income by a plus sign (+) or a black entry. Indicate deficit by a minus sign (-) or a red entry.

6103

Survary of Loss and Damage Payments by Commodity Groups
(From Schedule G)

5157 Territory

Loss and Damage Summary -- Sheet 1 of ___

Line No.	Carrier (1)	Commodity group: _____ Loss and damage payments (2)	Number of carloads (3)	L. & D. payments per carload (Col.(2) + col. (3)) (4)	Number of tons (5)	L. & D. payments per ton (Col.(2) + col.(5)) (6)	Freight revenue (7)	Ratio of L. & D. payments to revenue (Col.(2) + col. (7)) (8)	Commodity group: _____ Loss and damage payments (9)	Number of carloads (10)	L & D. payments per carload (Col.(9) + col.(10)) (11)	Number of tons (12)	L. & D. payments per ton (Col.(9) + col.(12)) (13)	Freight revenue (14)	Ratio of L. & D. payments to revenue (Col.(9) + col.(14)) (15)	Line No.
1																1
2																2
3																3
4																4
5																5
6																6
7																7
8																8
9																9
10																10
11																11
12																12
13																13
14																14
15																15
16																16
17																17
18																18
19																19
20																20
21																21
22																22
23																23
24																24
25																25
26																26
27																27
28																28
29																29
30																30
31																31
32																32
33																33
34																34
35																35
36																36
37																37
38																38
39																39
40																40
41																41
42																42
43																43
44																44
45																45
46																46
47																47
48																48
49																49
50																50
51																51
52																52
53																53
54																54
55	Total															55

6104

Assembly of Costs of _____ Car 1/ Traffic, Operating Expenses, Rents and Taxes

5158

_____ Territory

Carload Assembly Schedule

Sheet 1 of ?

Line No.	Net load per car tons	Expenses independent of distance (origin plus destination)						Expenses treated as proportional to the length of haul						Line No.
		Group IV - C.L. Industry and team track switching expenses per loaded car 2/	Group VI - C.L. Carload freight train car maint. and rentals, switching serv. origin + dest. only, expense per loaded car 3/	Group VIII - C.L. Station clerical expense per carload 4/	Total C. L. switching expenses, freight train car expenses (terminal) and station exps., per loaded car (Cols. (2), (3), and (4))	Number of cwt. per net load per car (Col. (1) x 20 cwt.)	Switching freight train car maint., and station expenses per cwt. (Col. (5) + col. (6))	Group I - C. L. freight train car expenses - running, other than mileage cars, per loaded car-mile 5/	Group II - C.L. Running exps. common to all cars, incl. interchange and intertrain switching per loaded car-mile 6/	Gross tons of car & contents, incl. empty return (Col. (1) + footnote 1, line (d))	Group III - C.L. Remaining running expenses treated on GTM basis and converted to a cost per loaded car-mile (Col. (10) x ____ cents per GTM 7/	Total running exps. stated in terms of loaded car-mile incl. empty ret. (Cols. (8), (9), and (11))	Running exps. per 100 pounds of net load per mile (Col. (12) - col. (6))	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
1	5													1
2	6													2
3	7													3
4	8													4
5	9													5
6	10													6
7	11													7
8	12													8
9	13													9
10	14													10
11	15													11
12	16													12
13	17													13
14	18													14
15	19													15
16	20													16
17	21													17
18	22													18
19	23													19
20	24													20
21	25													21
22	26													22
23	27													23
24	28													24
25	29													25
26	30													26
27	31													27
28	32													28
29	33													29
30	34													30

1/ (a) Territorial average tare weight: _____ tons. Computed by weighting the tare weight of each reporting carrier in the given territory by the number of carloads handled by each carrier in this type of car.

(b) Territorial ratio of empty to loaded car-miles: _____%. Computed by weighting the ratio for each reporting carrier in the territory for the type of cars shown by the number of carloads handled by each carrier in this type of car.

(c) Equated empty tare tons: _____ tons. (Line (a) x line (b))

(d) Total territorial tare weight: _____ tons. (Line (a) + line (c))

2/ Territorial Summary, sheet 2, twice column (4).

3/ Territorial Summary Schedule, sheet 2, twice column (13) Where costs are being developed for equipment rented on a mileage basis (refrigerator cars and tank cars) leave column (3) blank.

4/ Territorial Summary Schedule, sheet 3, twice column (10)

5/ Compute cost for loaded and empty directions in terms of the loaded direction only. Use lines (a) and (b) for railroad owned equipment and lines (c) and (d) for equipment rented on a mileage basis. Carry forward the amounts from lines (b) or (d), respectively to column (8)

Item	Source	Amount: Railroad owned equipment	Amount: Cars rented on mileage basis
(a) R.R. owned equipment, cost per mile, loaded direction ..	Summary Schedule, sheet 1, column (5)		XXX
(b) R.R. owned equipment, cost per mile, loaded + empty ret.	Line (a) x (1.0 + ratio) from 1/, line (b)		XXX
(c) Equipment rented on mileage basis, cost per mile loaded direction	Cost per mile from AAR Mileage Tariffs, Series 7, x (1.0 + ratio) from Sch. E, sh. 1, line 16, col. (5)	XXX	
(d) Equipment rented on mileage basis, cost per mile loaded plus empty return	Line (c) x (1.0 + _____ratio) from 1/, line (b)	XXX	

6/ Compute cost for loaded and empty directions in terms of loaded direction only. Cost per car-mile from Summary Schedule, sh. 1, col. (8), line 55. _____cents x (1.0 + _____ ratio) from 1/, line (b).

7/ Cost per gross ton-mile from Summary Schedule, sheet 1, column (12), line 55.

6105

Assembly of Costs of _____ Car 1/ Traffic, Operating Expenses, Rents and Taxes

_____ Territory
Carload Assembly Schedule
Sheet 2 of 2

Line No.	Net load per car tons (1)	Expenses independent of distance (origin plus destination): Group IV - C.L. Industry and team track switching expenses per loaded car 2/ (2)	Group VI - C.L. Carload freight train car maint. and rentals, switching serv., origin + dest. only, expense per loaded car 3/ (3)	Group VIII - C.L. Station clerical expense per carload 4/ (4)	Total C. L. switching expenses, freight train car expenses (terminal) and station exps., per loaded car (Cols. (2), (3) and (4)) (5)	Number of cwt. per net load per car (Col. (1) x 20 cwt.) (6)	Switching freight train car maint., and station expenses per cwt. (Col. (5) + col. (6)) (7)	Expenses treated as proportional to the length of haul: Group I - C. L. freight train car expenses - running, other than mileage cars, per loaded car-mile 5/ (8)	Group II - C.L. Running exps. common to all cars, incl. interchange and intertrain switching per loaded car-mile 6/ (9)	Gross tons of car & contents, incl. empty return (Col. (1) + footnote 1, line (d)) (10)	Group III - C.L. Remaining running expenses treated on GTM basis and converted to a cost per loaded car-mile (Col. (10) x ____ cents per GTM 7/) (11)	Total running exps. stated in terms of loaded car-mile incl. empty ret. (Cols. (8), (9), and (11)) (12)	Running exps. per 100 pounds of net load per mile (Col. (12) + col. (6)) (13)	Line No.
1	35													1
2	36													2
3	37													3
4	38													4
5	39													5
6	40													6
7	41													7
8	42													8
9	43													9
10	44													10
11	45													11
12	46													12
13	47													13
14	48													14
15	49													15
16	50													16
17	51													17
18	52													18
19	53													19
20	54													20
21	55													21
22	56													22
23	57													23
24	58													24
25	59													25
26	60													26
27	61													27
28	62													28
29	63													29
30	64													30

1/ (a) Territorial average tare weight: _____ tons. Computed by weighting the tare weight of each reporting carrier in the given territory by the number of carloads handled by each carrier in this type of car.
(b) Territorial ratio of empty to loaded car-miles: _____%. Computed by weighting the ratio for each reporting carrier in the territory for the type of cars shown by the number of carloads handled by each carrier in this type of car.
(c) Equated empty tare tons: _____ tons. (Line (a) x line (b))
(d) Total territorial tare weight: _____ tons. (Line (a) + line (c)

2/ Territorial Summary, sheet 2, twice column (4).
3/ Territorial Summary Schedule, sheet 2, twice column (13) Where costs are being developed for equipment rented on a mileage basis (refrigerator cars and tank cars) leave column (3) blank.
4/ Territorial Summary Schedule, sheet 3, twice column (10)
5/ Compute cost for loaded and empty directions in terms of the loaded direction only. Use lines (a) and (b) for railroad owned equipment and lines (c) and (d) for equipment rented on a mileage basis. Carry forward the amounts from lines (b) or (d), respectively to column (8)

Item	Source	Amount: Railroad owned equipment	Amount: Cars rented on mileage basis
(a) R.R. owned equipment, cost per mile, loaded direction ..	Summary Schedule, sheet 1, column (5)		xxx
(b) R.R. owned equipment, cost per mile, loaded + empty ret.	Line (a) x (1.0 + _____ ratio) from 1/, line (b)		xxx
(c) Equipment rented on mileage basis, cost per mile loaded direction	Cost per mile from AAR Mileage Tariffs, Series 7, x (1.0 + _____ ratio) from Sch. E, sh. 1, line 16, col. (5)	xxx	
(d) Equipment rented on mileage basis, cost per mile loaded plus empty return	Line (c) x (1.0 + _____ ratio) from 1/, line (b)	xxx	

6/ Compute cost for loaded and empty directions in terms of loaded direction only. Cost per car-mile from Summary Schedule, sh. 1, col. (8), line 55. _____ cents x (1.0 + _____ ratio) from 1/, line (b).
7/ Cost per gross ton-mile from Summary Schedule, sheet 1, column (12), line 55.

6106

Assembly of Costs of L.C.L. Traffic, Operating Expenses, Rents and Taxes 1/

Territory
L.C.L. Assembly Schedule
Sheet 1 of 1

Line No.	Net load per L.C.L. car (tons)	Grp. IV-LCL Switching expenses, frthouse, per loaded car 2/	Grp. VI-LCL frt. train car maint. & rentals & switching exps. per loaded car 2/	Grps. IV & VI Switching plus freight train car expenses per ton (Cols. (2) + (3)) ÷ Col.(1)	Grp. VIII-LCL Station clerical expenses per ton 4/	Grp. IX-LCL Station platform handling per ton 5/	Total L.C.L. switching, exps., frt. train car exps. (terminal) & station expe. per ton (Cols. (4), (5) and (6)	Number of cwt. per net load (Col. (1) x 20 cwt.)	Total switching frt. train car exps. (terminal) station clerical & platform exps. 50 per cent. (Col.(7)x50 cwt.)	Grp. I-LCL Frt. train car exps. - running, per loaded car-mile 4/	Grp. II-LCL Running exps. common to all cars incl. interchange & intra-train switching per loaded car-mile 1/	Grp. V - LCL Freighthouse switching exps. acct. transfer stated in terms of loaded car-miles (Terr. Summary Sch. 7, col. (10), line 55 (12)	Grp. VII-LCL frt. train car exps., (terminal) acct. transfer stated in terms of loaded car-miles (Terr. Summary Sch. sh., col.(7) (13)	Subtotal running expenses stated in terms of loaded car-miles, incl. empty return (Cols. (10), (11), (12) and (13)) (14)	Gross tons of car and contents, incl. empty return 3/ (15)	Grp. III-L.C.L. Terminal running exps. treated on GTM basis & converted to cents per loaded car-mile (Col.(15) x ____ cents per GTM 9/) (16)	Subtotal running exps. treated on loaded car-mile basis, incl. empty return (Col. (14) + col. (16)) (17)	Subtotal running exps. per 100 lbs. of net load per mile (Col. (17) ÷ col. (8)) (18)	Total running exps. per 100 lbs. per mile, incl. station platform exps., account transfer (Col. (18) + ____ cents per 100 lbs.) 10/ (19)	Line No.
1	1.0																		1
2	1.5																		2
3	2.0																		3
4	2.5																		4
5	3.0																		5
6	3.5																		6
7	4.0																		7
8	4.5																		8
9	5.0																		9
10	5.5																		10
11	6.0																		11
12	6.5																		12
13	7.0																		13
14	7.5																		14
15	8.0																		15
16	8.5																		16
17	9.0																		17
18	9.5																		18
19	10.0																		19
20	10.5																		20
21	11.0																		21
22	11.5																		22
23	12.0																		23
24	12.5																		24
25	13.0																		25
26	13.5																		26
27	14.0																		27
28	14.5																		28
29	15.0																		29

1/ Unless otherwise indicated, the L.C.L. assembly is based on movement of L.C.L. traffic in box cars.
2/ From Territorial Summary, sheet 2, line 55, twice column (7).
3/ From Territorial Summary, sheet 3, line 55, twice column (4).
4/ From Territorial Summary, sheet 3, line 55, twice column (13).
5/ From Territorial Summary, sheet 4, line 55, twice column (4)
6/ Compute cost for loaded and empty directions in terms of the loaded direction only. Carry forward the amount for line (b) to column (10).

	Line	Source	Amount
(a)	Cost per mile, loaded direction	Territorial Summary, sheet 1, line 55, column (5)	
(b)	Cost per mile, loaded plus empty return	Line (a) x (1.0 + _____ ratio - see Carload Assembly Schedule, sheet 1, box cars, 1/, line (b))	
(c)	(Leave blank)		
(d)	(Leave blank)		

7/ Compute cost for loaded and empty directions in terms of loaded direction only. Cost per car-mile from Carload Assembly Schedule, sheet 1, box cars, column (9).
8/ Compute as follows: Column ____ + _____ tare tons, loaded plus empty direction, from Carload Assembly Schedule, sheet 1, footnote 1, line (d)
9/ Cost per gross ton-mile from Territorial Summary, sheet 1, line 55, column (10).
10/ Cost per net ton mile _____(cents), from Territorial Summary, sheet 4, line 55, column (7) divided by 20 cwt.

5761

Table No. _____

Carload Distance Cost Scale for Commodities in _____ Cars, Including Operating Expenses, Rents and Taxes for _____(year) 1/

_____ Territory
Carload Cost Scales
Sheet 1 of

Distance in miles	Net load per car in tons														
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	(Cost per 100 pounds in cents)														
0															
10															
20															
30															
40															
50															
60															
70															
80															
90															
100															
120															
140															
160															
180															
200															
220															
240															
260															
280															
300															
320															
340															
360															
380															
400															
420															
440															
460															
480															
500															

1/ Compute the cost scale by inserting in the line designated "0" the terminal expenses per hundred pounds for each net load shown in the Carload Assembly Schedule, column (7). For any given distance increase such terminal expense per hundred pounds by the line-haul expenses obtained by multiplying the length of haul in miles by the line-haul expenses per hundred pounds per mile for each net load shown in the Carload Assembly Schedule, column (13). The carload cost study provides for several levels of cost. Cost Level II, covering operating expenses, rents and taxes, is that shown in this table. To compute the remaining levels of cost, III to V(b), inclusive, increase the costs shown herein by the percentages developed from the Territorial Summary as follows:

Cost Level III(a): See Territorial Summary Schedule, sheet 7, column (10).
Cost Level III(b): See Territorial Summary Schedule, sheet 7, column (4).
Cost Level IV: See Territorial Summary Schedule, sheet 5, columns (4) plus (8).
Cost Level V(a): See Territorial Summary Schedule, sheet 5, columns (4) plus (8), plus sheet 8, column (4).
Cost Level V(b): See Territorial Summary Schedule, sheet 5, columns (4) plus (8) plus sheet 7, column (8).

See Introductory Page 1 for the items included in each level of cost. Include the loss and damage for any given commodity group by adding to the costs shown above the loss and damage payments per hundred pounds for such group. Payments to be added after the cost scales have been increased by the percentages referred to above.

Table No. _____

L.C.L. Distance Cost Scale, Assuming Traffic Moved in Box Cars, and Including Operating Expenses, Rents and Taxes for _____(year) 1/

_____ Territory
L.C.L. Cost Scales
Sheet1 of 2

Distance in miles	Net load per car in tons													
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5
	(Cost per 100 pounds in cents)													
0														
10														
20														
30														
40														
50														
60														
70														
80														
90														
100														
120														
140														
160														
180														
200														
220														
240														
260														
280														
300														
320														
340														
360														
380														
400														
420														
440														
460														
480														
500														

Distance in miles	Net load per car in tons													
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5
	(Cost per 100 pounds in cents)													
600														
700														
800														
900														
1000														
1100														
1200														
1300														
1400														
1500														
1600														
1700														
1800														
1900														
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2100														
2200														
2300														
2400														
2500														
2600														
2700														
2800														
2900														
3000														
3100														
3200														
3300														
3400														
3500														

1/ Compute the less-carload cost scale by inserting in the line designated "0" the terminal expenses per hundred pounds for each net load shown in the Less-carload Assembly Schedule, column (9). For any given distance increase such terminal expense per hundred pounds by the line-haul expenses obtained by multiplying the length of haul in miles by the line-haul expenses per hundred pounds per mile for each net load shown in the Less-carload Assembly Schedule, column (19). The less-carload cost study provides for three levels of cost. Cost Level II, covering operating expenses, rents and taxes, is that shown in this table. To compute the remaining levels of cost, III(a) and III(b), increase the costs shown herein by the percentages developed from the Territorial Summary as follows:

Cost Level III(a): See Territorial Summary Schedule, sheet 6, column (13).
Cost Level III(b): See Territorial Summary Schedule, sheet 5, column (13).

See Introductory Page 1 for the items included in each level of cost. Include the loss and damage by adding to the costs shown above the loss and damage payments per hundred pounds on less-carload traffic. Payments to be added after the cost scales have been increased by the percentages referred to above.

EXHIBIT 5

INTERSTATE COMMERCE COMMISSION
Bureau of Statistics

Witness Hilles.

Progression in Freight Rate Mileage Scales

(Revised Issue)

(This study, issued as information, has not been considered or adopted by the Interstate Commerce Commission.)

Statement No. 4031
File No. 26-A-11
(56 pages)

Washington, D. C.
August 1940